



Nero Burning ROM Manual

Nero AG

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1 General information

1.1 About the manual

This manual is intended for all users who want to learn how to use Nero Burning ROM. It is therefore structured according to operations and provides step-by-step instructions for what you want to do.

In order to make best use of this manual, please note the following conventions:

Symbol	Meaning
	Indicates warnings, preconditions or instructions that have to be followed strictly.
	Indicates additional information or advice.
1. Start ...	A number at the beginning of a line indicates a request for action. Carry out these actions in the order specified.
	Indicates an intermediate result.
	Indicates a result.
OK	Indicates text passages or buttons that appear in the program interface. They are shown in bold print.
<u>Chapter</u>	Indicates references to other chapters. They are executed as links and are shown in red and underlined.
[...]	Indicates keyboard shortcuts for entering commands.

1.2 About Nero Burning ROM

Nero Burning ROM is a high-performance software application with a user-friendly interface for burning data, music and videos on CD and DVD.

Nero Burning ROM enables advanced users to customize their work. You will have full control of your CD burning project. For example, you can define the file system used, assign a name for the disc or customize the toolbar to suit your requirements.

Despite the scope and the vast ability of Nero Burning ROM, it remains an easy-to-use burning program which creates your own discs in just three easy steps. First select the desired disc type and the disc format (depending on the installed recorder and your requirements), compile the files for burning and then start the burn process. It is just as quick and easy to copy discs (not copy-protected discs).

1.3 Versions of Nero Burning ROM

Two different versions of Nero Burning ROM are available:

Nero Burning ROM Retail and **Nero Burning ROM Essentials**.

The full Nero Burning ROM Retail version provides full functionality.

Nero Burning ROM Essentials differs from the full version in the following ways:

- No crossfade for audio tracks (see [Audio Track Properties window](#))
- No virus scanner (see [Updating the virus scanner](#))
- No simultaneous burning with multiple recorders (see [Burn tab](#) for example.)
- No plug-ins

2 System requirements

Nero Burning ROM is installed together with the Nero suite - the system requirements are the same. You can find more detailed information on the system requirements in the Nero QuickstartGuide. In addition, the following requirements apply:

Optical device: CD and/or DVD-RAM recorder

Extra: 16-bit Windows® compatible sound card and speakers

Optional: LightScribe® recorder and LightScribe® disc



Using LightScribe® Direct Disc Labeling

Your computer requires the latest LightScribe® System Software if you are using a CD/DVD drive which supports LightScribe®.

Please install the LightScribe® System Software separately if you have installed a newer version of Nero 7 from the Nero website. You can find the latest version under www.nero.com/link.php?topic_id=93.

LabelFlash™ recorder and Labelflash™ disc

Blu-ray recorder and Blu-ray disc

HD DVD recorder and HD DVD



Installation of the latest WHQL certified device drivers is recommended. WHQL stands for Windows® Hardware Quality Labs and means that the device driver certified by Microsoft® is compatible with Microsoft® Windows® and the respective hardware.

3 Supported formats

Nero Burning ROM supports the following disc types:

- CD
- DVD
- HD DVD
- Blu-ray Disc



The recorder installed determines which disc type (**CD**, **DVD**, **HD DVD** and/or **Blu-ray Disc**) can be burned.

With Nero Image Recorder which is installed in Nero Burning ROM you will still be able to create an image (see [Creating an image file](#)) even if you have not installed a recorder. Nero Image Recorder is also suitable for creating an image of a disc type not supported by the installed recorder (see

[Expert Features](#)). You can therefore create a DVD image for instance without having installed a DVD recorder.

Nero Burning ROM also supports burning and label printing using a recorder that supports LightScribe® or LabelFlash™ technology.

You can use Nero Burning ROM to burn the following formats:

Disk formats	Audio formats	Video formats	Image formats
<ul style="list-style-type: none"> ■ Data disc: CD/DVD-ROM (ISO) CD/DVD/HD DVD-ROM/ Blu-ray disc (UDF) CD/DVD-ROM (UDF/ISO) ■ Audio CD ■ Mixed Mode CD ■ CD EXTRA ■ Video CD and Super Video CD ■ miniDVD ■ Audiobook CD ■ DVD-Video ■ Bootable disc (CD/DVD-ROM (Boot)) 	<ul style="list-style-type: none"> ■ AIFF/AIF ■ Audible Audiobook ■ HE-AAC ■ mp3PRO ■ MP4 (audio) ■ Nero Digital Audio ■ PCM ■ WAV ■ WMA 	<ul style="list-style-type: none"> ■ AVI ■ ASF ■ DV-AVI ■ MP4 (video) ■ MPEG-1 ■ MPEG-2 ■ Nero Digital Video ■ WMV ■ Xvid 	<ul style="list-style-type: none"> ■ BMP ■ GIF ■ JPEG ■ PNG ■ TIFF

4 Launching the program

4.1 Launching Nero Burning ROM via Nero StartSmart

To start Nero Burning ROM via Nero StartSmart, proceed as follows:

1. Click on the **Nero StartSmart** icon.
→ The Nero StartSmart window is opened.
2. Click on the arrow button in the left-hand margin of the window.
→ The extended dialog box is opened.



Fig. 1: Nero StartSmart

3. Select the **Nero Burning ROM** entry from the **Applications** drop-down menu.
→ **Nero Burning ROM** is opened with the **New Compilation** window.

















→ You have successfully launched Nero Burning ROM via Nero StartSmart.

4.2 Launching Nero Burning ROM directly

To launch Nero Burning ROM directly, proceed as follows:

1. If you are using the Windows XP Start menu, click Start > All Programs > Nero 7 (Premium) > Audio or Data > **Nero Burning ROM**.
If you are using the classic Start menu, click Start > Programs > Nero 7 (Premium) > Audio or Data > **Nero Burning ROM**.
→ **Nero Burning ROM** is opened with the **New Compilation** window.

→ You have successfully started Nero Burning ROM.

	Saves the active compilation.
	Cuts selected elements in the compilation (selection).
	Copies selected elements in the compilation (selection).
	Pastes a selection that was cut or copied beforehand.
	Launches Nero CoverDesigner with which you can create labels and covers. Information about a current compilation such as title, number and names of the files is incorporated into the document data. For further information refer to the Nero CoverDesigner manual.
	Launches Nero Express. Nero Express is a wizard supported application based on Nero Burning ROM. For further information refer to the Nero Express manual.
	Starts the burn process by opening the Burn Compilation window containing the Burn tab.
	Starts the copy process by opening the New Compilation window containing the Burn tab.
	Displays information on the disc inserted such as the contents (if any) and capacity for instance.
	Opens the selected recorder.
	Shows or hides the file browser.
Drop-down menu	Displays available recorders.
	Opens the Choose recorder window by selecting from a list a recorder available for the burn process.
	Opens the Burn Label window where you can create or load a label to print on the label or data side of a LabelFlash™ DVD (see LabelFlash™). The button is only available if a recorder that supports LabelFlash™ is connected.
	Starts Nero CoverDesigner to create or load a label which is to be printed to the label side of a LightScribe® disc (see LightScribe®). The button is only available if a recorder that supports LightScribe® is connected.
	Displays information on program and version number.
	Opens the help.

5.2 Basic steps

The main task of Nero Burning ROM is to select files and folders and to burn them to a disc. This is done in three basic steps:

- In the **New Compilation** window select a disc type and the disc format and set the options in the tabs (see [New compilation](#)).
- In the selection screen select files that you want to burn (see [Selecting a file](#)).
- Start the burn process (see [Burning a compilation](#)).

6 New compilation

6.1 New Compilation window

In the **New Compilation** window select the disc type and configure the options for the disc format in the tabs. The window basically looks the same for all disc types. The only difference is the tabs that are available.

When you launch Nero Burning ROM, the **New Compilation** window opens automatically. If the window is not open, click on the **New** button. In the default setting, **CD-ROM (ISO)** is selected and the **Multisession** tab is on top. If you have not installed a recorder, the **ISO** tab is on top.

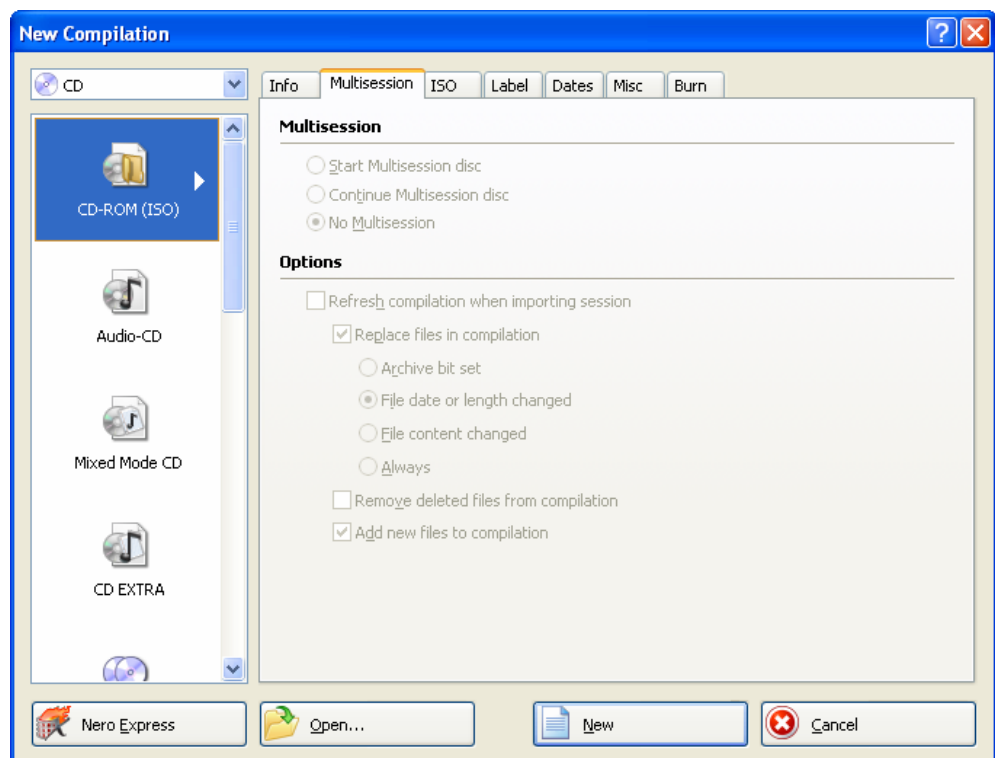


Fig. 3: **New Compilation** window, CD-ROM (ISO) disc type

The window consists of a drop-down menu, a selection list, various tabs and four buttons.

The drop-down menu can contain the entries **CD**, **DVD**, **HD DVD** and **Blu-ray Disc**. The selection list will contain different entries depending on the entry selected.



The recorder installed will determine which disc type (**CD**, **DVD**, **HD DVD** and/or **Blu-ray Disc**) is displayed and burned. If the recorder can only burn CDs, the drop-down list is grayed out.

Using Nero Image Recorder which is installed in Nero Burning ROM you will always be able to create an image (see [Creating an image file](#)) even if you have not installed a recorder. Nero Image Recorder is also suitable for creating an image from a disc type that the installed recorder does not support (see

[Expert Features](#)). You can therefore create a DVD image for instance without having installed a DVD recorder.

The following entries are available in the selection list:

Entry	Description
CD/DVD-ROM (ISO)	Creates a data CD/DVD, each file type can be burned. The burned data complies with the ISO standard.
Audio CD	Creates a standard Audio CD that can play audio files on all Audio CD players.
Mixed Mode CD	Creates a CD with data and audio files in a single session. Usually a data file is followed by one or more audio files for instance (e.g. sound track in PC games). Older Audio CD players are often not capable of recognizing the data file as such and attempt to play it.
CD EXTRA	Creates a multisession CD with audio and data files that are stored in two sessions. The first session contains the audio files and the second session the data. Popular CD players play the first session as Audio CDs. The second session can only be used by PCs with a CD-ROM drive, it cannot be 'seen' by a normal CD player.
Copy CD/DVD/HD DVD/Blu-ray Disc	Copies a source disc to a CD/DVD/HD DVD/Blu-ray disc (see Copying discs).
Video CD	Creates a CD that can play video and/or picture files on almost all VCD and DVD players. While the Video CD (VCD) is being burned, Nero Burning ROM automatically converts the files into the MPEG-1 format required by the Video CD.
Super Video CD	Creates a CD that can play video and/or picture files on almost all SVCD and DVD players. The resolution is higher than for the VCD, and so the quality of the image is mostly superior. When burning the Super Video CD (SVCD), Nero Burning ROM uses the DVD Video plug-in to automatically convert the files into the MPEG-2 format required by the Super Video CD.
miniDVD	Creates a CD that uses the specifications of a DVD. The miniDVD has the same technical options and qualities as a DVD. It can easily be played on a PC whereas there is no guarantee that it can be played in all DVD players. You can use Nero Burning ROM to burn a miniDVD if the DVD video title, i.e. a complete DVD folder structure is already available. However, if you want to convert video files into a DVD video title, you can do so with Nero Vision but not with Nero Burning ROM.
CD/DVD-ROM (Boot)	Creates a bootable CD (see Bootable disc).
CD/DVD-ROM/HD DVD/Blu-ray Disc (UDF)	Creates a data disc, all file types can be burned. The burned data complies with the UDF standard.
CD/DVD-ROM (UDF/ISO)	Creates a data disc; all file types can be burned. The burned data complies with ISO and UDF standards.

Audiobook CD	Creates CDs from an audiobook. The file format of the original audiobook file may be either Audible Audio (extension .aa) or MP3. The burned audiobook CD can be read and played by CD players. Since audiobooks can play for several hours, Nero Burning ROM saves the audiobook to multiple Audio CDs.
DVD-Video	Creates a DVD that can play high-quality video and/or picture files on DVD players. You can use Nero Burning ROM to burn a DVD if the DVD video title, i.e. a complete DVD folder structure is already available. However, if you want to convert video files into a DVD video title, you can do so with Nero Vision, but not with Nero Burning ROM.



The Nero Vision program works best for creating Video CDs and Super Video CDs. Nero Vision is an application in the Nero 7 suite and is automatically installed during the main installation procedure. You will find more information in the Nero Vision manual.

The following buttons are available:

Button	Meaning
Nero Express	Launches Nero Express. Nero Express is a wizard supported application based on Nero Burning ROM. For further information refer to the Nero Express manual.
Open	Opens a file browser where you can find and open a saved compilation.
New	Opens the selection screen where you can select the files for burning.
Cancel	Closes the New Compilation window.

You can set the options for the respective disc format in the tabs on the **Compilation** window. Refer to the matrix in the appendix for information on which tab is available for which disc type (see [Copying discs](#)). The following tabs are available:

Tab	Description
Info	Shows statistical information on the compilation.
Multisession	Contains options for configuring multisession discs (see Multisession tab). The tab is only available if a recorder is installed.
ISO	Contains options for configuring the ISO file system (see ISO tab).
UDF	Contains options for configuring the UDF file system (see UDF tab).
Title	Defines the title of the CD.
Date	Allows you to define the date of the compilation and of the associated files. You can also specify a validity period for the disc. (You can access the data regardless of the validity period specified)
Misc	Defines whether and which files are stored in the buffer memory. If you have a LightScribe® recorder, you can create or select the label that is to be printed in this tab. For the CD-ROM (ISO) disc type, you can convert the code for an AVI video to make it compatible with Xvid/MPEG-4 or DivX. We recommend that you only convert the code if you have experience with FourCC codes and AVI videos.

Audio CD	Contains options for configuring audio files. You can also enter additional information about the CD (see Audio CD tab).
CDA Options	Defines the strategy used by Nero Burning ROM for handling CD-DA files from a source Audio CD (see CDA Options tab).
CD EXTRA	Contains options for configuring albums (see CD EXTRA tab).
Video CD	Contains general options for the Video/Super Video CD (see Video CD tab).
Menu	Contains the option for configuring the look and content of the menu for the Video/Super Video CD (see Menu tab).
Audiobook CD	Displays statistical information on the Audiobook CD such as the number of CDs required for instance.
Boot	Contains options for configuring a bootable disc (see Bootable disc and Boot tab).
Burn	Contains options for configuring burning (see Burn tab).

6.1.1 Multisession tab

The **Multisession** tab provides the option to create multisession discs for data discs. Multisession discs can be burned in multiple sessions until you have reached the maximum disc capacity. A session is a self-contained data area that is burned using a single process, and consists of a lead-in (with the table of contents), and one or more tracks and a lead-out. Discs without the multisession option, e.g. Audio CDs, are burned in a single session.



Multisession discs are particularly suitable for backing up important files burned on a regular basis.

If a new multisession disc is being started, Nero Burning ROM also saves (if possible) the point of origin for the files. This information is used when continuing the multisession disc.

If a multisession disc is being continued, Nero Burning ROM automatically sets a cross reference to the imported session, i.e. the table of contents for the imported session is copied to the table of contents for the current session. You must define which session is being imported at the start of the burn process. The files in the previous sessions are retained and continue to take up space.

In the case of unchanged files, a cross reference is set to the file of the same name in the previous session. Enable the **Replace files in compilation** and **Add new files to compilation** check boxes to ensure that changed and new files are incorporated into the table of contents and burned again. The boxes are checked by default. In this case Nero Burning ROM automatically verifies whether the correct multisession disc has been inserted for continuation. If not, the disc is ejected.



If you disable the **Finalize disc** check box on the **Burn** tab, you can always burn additional sessions on the disc, but then only the last session will be visible and you will only be able to access data from the final session.

The **Multisession** tab contains the following check boxes in the **Multisession** area:

Start Multisession disc	<p>Burns the selected compilation in one session to the disc.</p> <p>If the disc already contains sessions, you can also select this option. Sessions are then not imported and cross references are not set.</p>
--------------------------------	---

Continue Multisession disc	Continues a multisession disc by burning an additional session to a disc with at least one session. Cross references to imported sessions are set in the process.
No Multisession	Creates a disc without a multisession.

The **Options** area is only enabled if the **Continue Multisession disc** check box is enabled. It contains the following configuration options:

Refresh compilation when importing session	<p>Refreshes the session by creating a cross reference to the imported session.</p> <p>This function is practical if backups are always being burned from the same folder in which most of the files are the same. The cross reference saves space.</p> <p>If you want to burn totally different files, we recommend that you disable the check box.</p>
Replace files in compilation	<p>Burns files of the same name again. This enables you to ascertain when the file should be burned again:</p> <ul style="list-style-type: none"> ■ Archive bit set ■ File date or length changed ■ File content changed ■ Always <p>If the check box is disabled, Nero Burning ROM sets a cross reference to the file in the previous session.</p> <p>We recommend that you disable this check box for backup discs.</p>
Remove deleted files from compilation	<p>Removes deleted files of the same name from the table of contents in the new session. A cross reference is not set to the file in the previous session, so you cannot access it anymore. (However the "removed" files are still on the disc and continue to take up space).</p> <p>We recommend that you disable this check box for backup discs.</p>
Add new files to compilation	<p>Burns new files that have been added.</p> <p>We recommend that you enable this check box for backup discs.</p>

6.1.2 ISO tab

The **ISO** tab provides options for configuring the ISO file system.

ISO 9660 is a system-independent standard. It can be read on all operating systems. The following features apply:

- Permits eight characters (Level 1) and/or 31 characters (Level 2) for the file name.
- Permits eight characters for the folder name.
- Restricts the maximum directory depth to eight levels (including root folder).
- The characters A-Z, 0-9 and the underscore (_) are allowed.

Joilet is a standard that has been designed for Microsoft® Windows® 95 and Microsoft® Windows® NT. Up to 64 characters are supported in the file name (8 characters in DOS). The characters A-Z, a-z as well as foreign language characters such as the German umlaut may be used.

The following configuration options are available in the **Data** and **File** area:

Data mode	Selects the mode for the data. Mode 1 and Mode 2/XA are available. The latest drives can easily read Mode 1 and Mode 2. Some older drives however cannot read Mode-1 discs correctly. If the disc is always to be readable on older drives, you should select the Mode-2/XA format.
File system	Selects the file system that is used for the data. ISO 9660 only and ISO 9660 + Joilet are available. ISO 9660 only: pure ISO format is used. ISO 9660 + Joilet: the ISO format is used and is enhanced by the Joilet standard.
File name length	Defines the possible length of the file name. Level 1 and Level 2 are available. In Level 1 the file name can be eight characters long and the file name extension (e.g. *.doc) three characters. In Level 2 the file name can be 31 characters long.
Font	Defines the font that is used.

In the **Relax restrictions** area, restrictions imposed on the selected file system are relaxed. For example, you can allow a higher path level or more than 64 characters for the Joilet name.

In the **Hints** area an advisory message appears if the disc cannot be read on all operating systems.



If it should be possible to read the disc on all operating systems, select ISO 9660 as the file system and disable all check boxes in the Relax restrictions area.



If the disc is to be used mainly on Windows® computers and you want to use lowercase letters and foreign language characters such as the German umlaut in the file names, select **ISO 9660 + Joilet** as the file system.

6.1.3 UDF tab

The **UDF** tab provides options for configuring the UDF file system. The UDF standard was developed by Osta (Optical Storage Technology Association) in response to the requirements of DVDs. The standard works on all platforms.

The following entries are available in the **Options** drop-down menu:

Automatic settings	Sets options automatically for the UDF file system. We recommend that you select this entry.
Manual settings	Enables you to manually define the UDF partition type and the file system version.
Enable Xbox™ compatibility mode	Creates a disc that is compatible with Xbox™.

6.1.4 Title tab

The **Title** tab provides options for configuring the name of the disc. The **Automatic** area is always available. The **Manual** area is only available if multiple file systems have been selected for the disc type, e.g. the **ISO 9660 + Joliet** entry on the **ISO** tab for instance.

The following configuration options are available in the **Automatic** area:

Automatic	Enables the Disc name text box
Disc name	Defines the name of the disc.
Add Date	Opens the Date window containing option fields for selecting a date.
Add Counter	Opens the Counter window which contains various configuration options. In addition, you can define the counter type. There are two options: Compilation counter : increments the counter for a new compilation. Disc counter : increments the counter after burning.

The **Manual** area enables you to enter a unique disc name for each file system. The restrictions for this file system also apply in connection with the given character set. Characters not allowed are replaced by underscores. The following text boxes are available:

Manual	Enables the text boxes in the Manual area.
ISO 9660	Defines the name for the ISO 9660 file system.
Joliet	Defines the name for the Joliet file system.
UDF	Defines the name for the UDF file system.

The following button is available in the **Advanced** area:

More Labels	Opens the More Labels window where you can enter additional information on the disc such as the Publisher for instance.
--------------------	---

6.1.5 Audio CD tab

The **Audio CD** tab provides options for configuring the Audio CD.

The following check boxes are available in the **General** area:

Normalize all audio files	Enables a filter that brings the volume of the audio files to be burned into line with one another. This is particularly recommended if the audio files originate from different sources.
No pause between tracks	Allows the audio files to merge into one another on the Audio CD without a pause (just like in live recordings). If the check box is disabled, there are pauses of two seconds between the audio files.

The following check box is available in the **CD Text** area:

Write on CD	Enables the option for writing CD Text. With CD players that support CD Text, the title of the CD, the name of the audio file as well as of the artist appear in the display.
--------------------	---

In the **Additional Information** area you can enter additional information about the Audio CD such as the producer or comments for instance.

6.1.6 CDA Options tab

The **CDA Options** tab provides options for configuring CD-DA files on the Audio CD.

The **CDA file strategy** area allows you to select the strategy that Nero Burning ROM should use for handling selected audio files from a source Audio CD. In general there are two methods:

- Read the audio file and store it in the buffer temporarily. The Audio CD can be burned in disc-at-once mode, which supports CD Text.
- Create a reference to the audio file and read it shortly before burning (track reference). The Audio CD can only be burned using the track-at-once mode.

The **CDA file strategy** area provides the following options in the drop-down menu:

Diskspace strategy	Saves the audio files temporarily to the Nero Burning ROM buffer. If there is no space available, a reference is created to the audio file and read just shortly before it is burned. This entry is selected by default.
Tempfile strategy	Saves audio files temporarily in the Nero Burning ROM buffer. If there is no space available, an error message is displayed.
Reference strategy	Creates a reference to the audio file and reads it shortly before burning. The source disc can only be a CD/DVD drive, not a recorder. The disc can only be burned using track-at-once mode.
Device dependent strategy	Creates a reference to the audio file if a CD/DVD drive is available. Otherwise the tempfile strategy is used.

The **Info** button displays more detailed information on the CDA file strategy.

The **Drive** area provides a list of all detected drives and recorders. The following configuration options are available:

Read speed	Selects the speed at which the CD is read.
Cache track on hard drive before burning	Saves the audio file in the cache before burning.

6.1.7 CD EXTRA tab

The **CD EXTRA** tab provides configuration options for albums. The following configuration options and buttons are available:

Album Identification	Defines a name for the album. This is particularly useful when the album is to comprise several CDs.
Number of Volumes in Album	Defines the number of discs that the compilation should contain.
Album set sequence number	Defines the album number for the current disc.
Pictures	Opens the CD EXTRA Pictures window where you can select the pictures for the front and flipside of the CD and define the picture format.
Languages	Displays the languages available for the album. When you select a language, you can add the title for the album in the Album title text box. Each language can contain a different title.

Add	Opens the New Language window where you can select a new language. The setting for Germany is "DE Germany". The country list is sorted alphabetically according to countries.
Delete	Deletes the selected language.
Album title	Adds an album title to the language highlighted in the Languages selection list.

6.1.8 Video CD tab

The **Video CD** tab provides the following configuration options for Video CD (VCD) and Super Video CD (SVCD):

Create standard compliant CD	Generates a VCD/SVCD, which can be played in a DVD player.
Store source pictures in	Generates an extra directory in the VCD/SVCD folder structure where the source formats of the pictures are stored automatically. You can assign a separate name for the extra directory.
Encoding resolution	Defines the color format to which the video files will be converted: the option buttons PAL and NTSC are available. The PAL option - the main color format in Europe - is selected by default.
Use CD-i application	Creates a VCD that can be played in a CD-i player. The check box is only available when the disc format Video CD is selected.
Try to fit to disc size	Automatically adjusts the bit rate to the disc size entered. The option button is only available when the disc format Super Video CD is selected.
User defined	Selects a bit rate. The option button is only available when the disc format Super Video CD is selected.
Compatibility	Opens the Super Video CD Compatibility Options window where you can set non-standard parameters for the SVCD. We recommend that you only use this option if you are familiar with standard formats and the creation of SVCDs. The button is only available when the disc format Super Video CD is selected.



When adding pictures to a VCD/SVCD Nero Burning ROM automatically creates a slide show. The picture files contained in it are stored in a DAT file. This kind of file can no longer be modified or viewed using an image processing program. If you would like to save the original formats as well, enable the **Store source pictures in** check box.

6.1.9 Menu tab

The following check box is available on the **Menu** tab for Video CD (VCD) and Super Video CD (SVCD):

Enable menu	Enables the menu for the VCD/SVCD and the grayed-out Menu and Text areas.
--------------------	---

The following drop-down menus are available in the **Menu** area:

Layout	Selects the menu layout.
Background mode	Defines how the wallpaper is inserted, or how it should be maximized or minimized for instance.
Wallpaper	Selects the wallpaper. You can also select none or load your own picture. You can also define the color of the wallpaper.

You can enter text content for headers and footers in the **Text** area and define the look (font, shading) of the header and footer, elements and references. The following configuration options are also available:

Preview first page	Opens the Menu Preview window which displays a pre-view of the menu.
Set as Default	Saves the current menu settings as default values.

6.1.10 Boot tab

The **Boot** tab provides configuration options for the bootable disc. The following configuration options are available in the **Source of boot image data** area:

Bootable logical drive	Selects a logical drive for the template data.
Image file	Selects an image file for the template data.
Browse	Opens the Open window where you can select an image file.
Boot locale	Selects the language that appears when the drive boots

You can configure expert settings in the **Advanced** area. It may be necessary to make changes for certain image files. Refer to the documentation for relevant information on the boot image. We recommend that you only change the settings if you are familiar with creating bootable discs and boot images. The following configuration options are available:

Enable expert features	Enables the following configuration options.
Emulation type	Selects an emulation type.
Boot message	Defines the message that opens when the drive boots.
Load segment of sectors	Defines where the boot image starts and how the sectors behave after booting.
Number of loaded sectors	Defines how many sectors will be loaded.

6.2 Creating a new compilation

To create a new compilation, proceed as follows.

1. Select the disc type you want from the drop-down menu in the **New Compilation** window.



The recorder you have installed will determine which disc type (**CD**, **DVD**, **HD DVD** and/or **Blu-ray Disc**) can be burned. If the recorder can only burn CDs, the drop-down menu is grayed out. But with Nero Image Recorder which is installed in Nero Burning ROM you will always be able to create an image (see [Image file](#)) even you have not installed a recorder.

→ The drop-down menu displays the disc formats that can be burned using this disc type.

2. Select the disc format you want from the drop-down menu.

→ The tabs for this disc format are displayed.



Select the **Copy CD** and **Copy DVD** entries to go to the copy process (see [Copying discs](#)).

3. Configure the options you want in the tabs (see [New Compilation window](#)).

4. Click on the **New** button.

→ The **New Compilation** is closed and the selection screen is opened.

→ You have successfully created a new compilation. Now you can add files to the compilation (see [Selecting a file](#)).

7 Selecting a file

7.1 Selection screen

The selection screen is the starting point for work that you want to do on compilations. The selection screen is opened in the main screen after you select the disc type and format and click on the **New** button.

The selection screen consists of the Compilation Area, the Browser Area and a capacity scale.

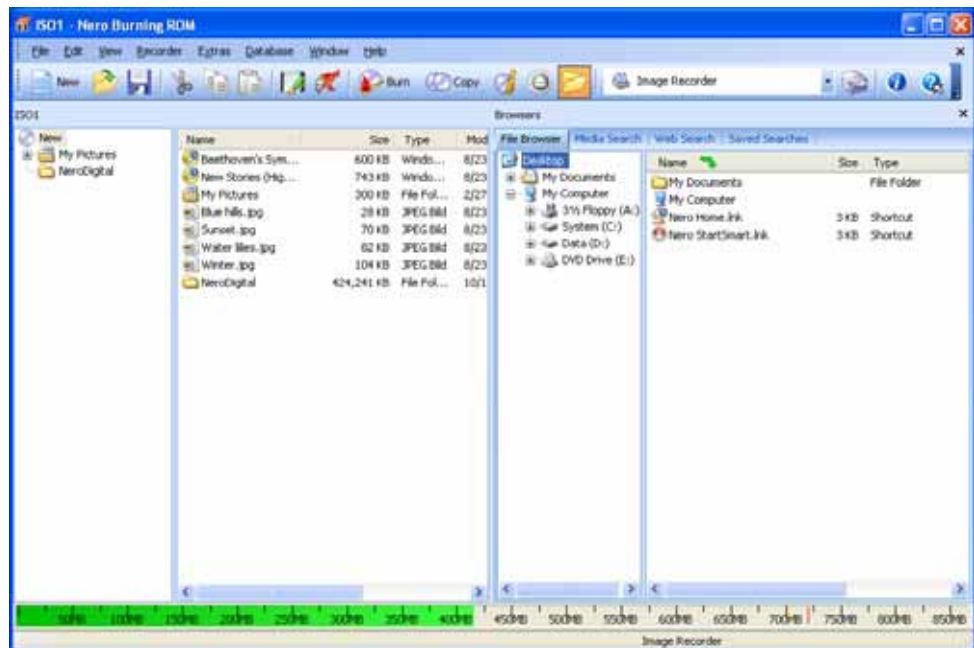


Fig. 4: Selection screen for the disc type CD-ROM (ISO)

The Compilation Area is named after the relevant compilation. Files and folders are compiled here for burning.

In the Browser Area (**Browser**) you can find the elements that you want to burn. Four tabs are available: the **File Browser** corresponds to the Windows® file browser you are already familiar with. In **Media Search**, **Web Search** and **Saved Searches** you can use Nero Search to find files on the computer.



The search wizard Nero Search is an application in the Nero 7 software suite and is automatically installed while Nero 7 is being installed. You will find more information in the Nero Scout manual.



If the Browser Area is hidden, you can show it again using the  button.

The bottom margin of the screen contains a capacity scale in MB (for data discs) or min (for Audio CDs). The exact magnitude of the scale will depend on which disc type you have selected.

When you are compiling files, a capacity bar indicates how much space the files need on the disc. The color of the capacity bar indicates whether the data will fit on the disc or not:

Green capacity bar	The data will fit on the disc.
Yellow capacity bar (from the yellow mark on the scale)	The data might fit on the disc. The size of the disc that has been inserted will determine whether the data will fit or not.
Red capacity bar (from the red mark on the scale)	The data will not fit on the disc. (unless you have inserted an oversize disc.)

The yellow and red marks are set by default for discs that are commercially available. The disc type you have selected will determine the exact scale value.



For example, blank CDs are available with a capacity of 650 MB or 700 MB. Therefore the yellow mark is set for CDs at 650 MB and the red at 700 MB.




If the capacity scale is hidden, you can show it again by clicking on the menu **File > Options > Show compilation size** and by enabling the check box **Show compilation size in the Nero status bar**.

7.2 Selecting files

You can select files by dragging them from the browser to the compilation area in the selection screen. The same principle is used for all disc formats.

To select and compile files, proceed as follows:

1. Select the files/folders that you want to burn from the Browser Area.
 2. Drag the required files/folders into the compilation area.
 - The files/folders are displayed in the compilation area and the capacity bar indicates how much space is being used on the disc.
 3. If you want to save the compilation with the selected files:
 1. Click on the  icon.
 - The **Save As** window is opened.
 2. Select a file name and a storage location and click on the **Save** button.
 - The compilation is saved and the **Save As** window is closed.
- You have successfully selected the files for burning and can now start the burn process (see [Burning a compilation](#)).

7.3 File selection details

There are certain details that you need to bear in mind when selecting files.

7.3.1 Audio CD

Two additional buttons are available in the Compilation Area for the Audio CD disc format:

Play	Plays the selected audio file.
Edit	Opens Nero WaveEditor.



Nero WaveEditor is an application in the Nero 7 software suite and is automatically installed while Nero 7 is being installed.

You can use Nero WaveEditor to create your own audio files or to edit existing ones. You can also digitize records and store them on the hard drive. For further information refer to the Nero WaveEditor manual.

Source audio files for an Audio CD may be contained on your hard drive as compressed audio files, or originate from one or more Audio CDs. You can also select an M3U playlist as the source; Nero Burning ROM automatically finds the MP3 audio files for burning whose paths are stored in the M3U playlist.



Audio CDs have been available on the market with a copy protection for some time now. It is not possible to either play or copy these using a computer. The copy protection is identifiable by a notice on the cover of the original CD.



If you select audio files directly from an Audio CD in a drive, you cannot specify a CD Text for the CD because audio files that have a drive as the source can only be burned in track-at-once mode. CD Text can only be burned in disc-at-once mode.

If you want to specify a CD Text for the audio files you have selected from the Audio CD, save the audio files to your hard drive (see [Saving audio files](#)) and then add them to the compilation.

When you drag the required audio file into the compilation area, the **Adding file(s)** window is opened and the file analyzed.

If you have selected a file from an Audio CD, the **Enter Source CD Name** window is opened where you are asked to assign a name to this CD.



The name that you assign to the CD is used by default as part of the file name. The name is also important if you select audio files from multiple Audio CDs. During the burn process Nero Burning ROM requests you to insert the required CD and quotes the name of the CD you selected.

You can work on the audio files in the compilation or change the properties (see [Audio Track Properties window](#)).

7.3.2 Mixed Mode CD and CD EXTRA

The selection screen for the disc formats mixed mode CD and CD EXTRA contains one compilation area for audio tracks and one for data files.

To select files, proceed as follows:

1. If you want to insert data files, click on the **Data** button.
→ The compilation area for data files is opened.
2. If you want to insert audio files, click on the **Audio** button.

→ The compilation screen for audio files is opened.

3. Proceed with the file selection (see [Selecting files](#)).

7.3.3 Video CD/Super Video CD

The selection screen for the disc formats Video CD and Super Video CD contains a compilation area for video and picture files and an area for data. The compilation area for videos/pictures contains the **Playback** button, which shows the selected video. The **Data** area contains data files that have been automatically added and the folder structure that is required to create a functioning VCD/SVCD.

To select files, proceed as follows:

1. If you want to insert video files or pictures, click on the **Videos/Pictures** button.
 - The compilation area for video files and pictures is opened.
2. Drag the desired files into the compilation area.
 - The files are displayed in the compilation area and the capacity bar indicates how much space is required on the disc. Nero Burning ROM automatically generates a slide show from the pictures that have been inserted. If you enabled the **Store source pictures in** check box beforehand, Nero Burning ROM automatically saves the original pictures in the **PICTURES** folder in the data area.

If an MPEG file does not have the appropriate features of a VCD or SVCD, Nero Burning ROM recognizes the wrong format and you have three options:



Turn Off Standard Compliance and Continue: burns the file without making changes to the CD. We recommend that you only select this option if you are experienced in creating VCD/SVCDs.

Re-Encode the Video File: decodes the existing file, converts it to the correct resolution and frame rate and encodes it again. Re-encoding is done before burning. This process requires both time and temporary memory space.

Cancel: interrupts the addition of the video file, i.e. it is not added to the compilation.

3. If you want to view the data area, click on the **Data** button.
 - The data area is opened. The area contains red folders generated by Nero Burning ROM. This preset folder structure is required to create a VCD/SVCD. If you have enabled the **Store source pictures in** check box beforehand, you will also find the **PICTURES** folder in the data area.



Do not change the folder structure in the **Data** area in any way and do not drag any files into the preset folder. The folder structure is required as preset in order to create a functional VCD/SVCD.

4. Proceed with the file selection (see [Selecting files](#)).

7.3.4 miniDVD

The selection screen for the disc format miniDVD contains two preset folders in the Compilation Area: **AUDIO_TS** and **VIDEO_TS**.

To select files, proceed as follows:

1. Drag the existing DVD folder structure of the video title ("Video_TS" folder) from the Browser Area into the **VIDEO_TS** folder in the Compilation Area.
 - ➔ The files are displayed in the compilation area and the capacity bar indicates how much space is required on the disc.
2. Proceed with the file selection (see [Selecting files](#)).

7.3.5 Audiobook CD

To select files, proceed as follows:

1. Drag an audiobook file into the Compilation Area.
 - ➔ Nero Burning ROM analyzes the file and automatically cuts it if necessary so that it can be burned to multiple CDs. A list in the compilation area will indicate how many CDs are being burned and how many minutes are allocated to each.
2. Proceed with the file selection (see [Selecting files](#)).

7.4 Audio Track Properties window

In the **Audio Track Properties** window you can view the properties of a selected audio file, i.e. of a track, in the compilation, change it if necessary and edit the audio file. You can open the window via the menu **Edit > Properties** menu.

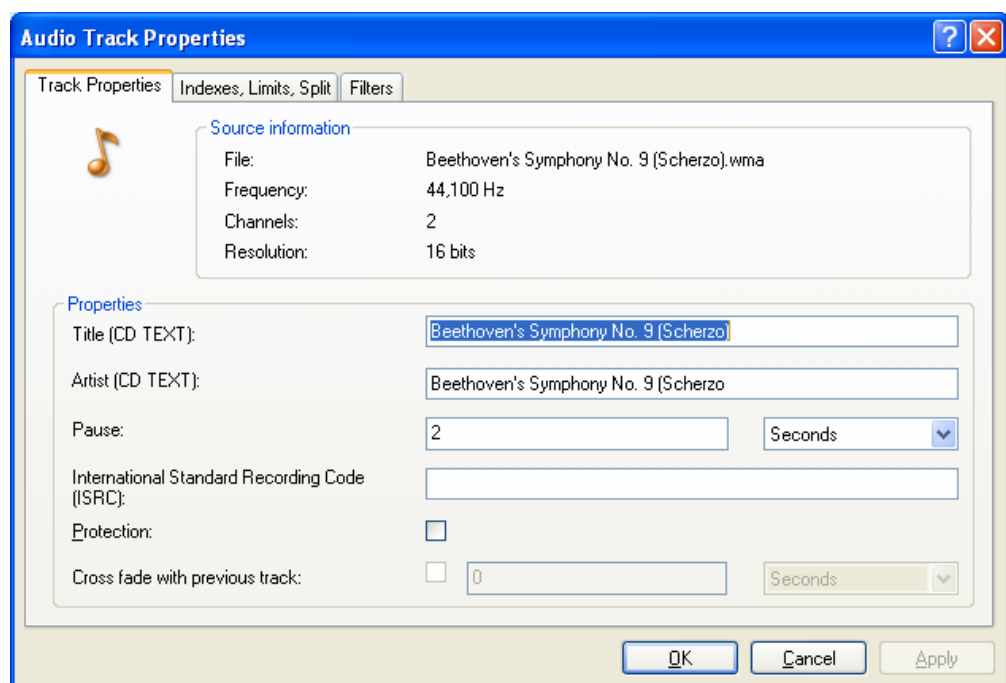


Fig. 5: Audio Track Properties window

The window contains the following tabs:

Track Properties	Contains general options for configuring the audio file (see Track Properties tab).
Indexes, Limits, Split	Contains the option for splitting the audio file and for setting indexes. You can also play back the audio file (see Indexes, Limits, Split tab).
Filters	Contains different filters that can be applied to the audio file. Different options are also available for configuring each filter (see Filters tab).



The audio file is edited using a non-destructive procedure. In other words, the actual recording is not changed, but marks are simply set. The steps in the editing process can be undone at any time and no additional audio data is generated. The audio file is not actually changed until it is burned.

7.4.1 Track Properties tab

The **Track Properties** tab contains general options for configuring the audio file.

General information on the selected audio file is displayed in the **Source information** area.

The **Properties** area offers the following configuration options:

Title	Defines a title which is saved as CD Text.
Artist	Defines the artist which is saved as CD Text.
Pause	Defines the length of the pause between this and the subsequent audio file. You can specify the length of the pause in seconds or in sectors.
International Standard Recording Code	Identifies the CD title using a 12-figure digital code. The ISRC is entered in the subcode and included silently. If you do not know the ISRC, you should leave this text box blank.
Copy Protection	Enables copy protection.
Crossfade	Defines a crossfade between this and the previous audio file. You can specify the length of the crossfade in seconds or in sectors.

7.4.2 Indexes, Limits, Split tab

The **Indexes, Limits, Split** tab provides options for editing the audio file.

The **Oscilloscope** area displays a graphical representation of the audio file. You can mark sections here to edit them.

The **Positions** area contains the following buttons:

New Index	Sets a new index position at the selected position. For the CD player this is the position from which a new number starts and the player can also jump to it directly. However, not all CD players support this function.
Edit	Opens the Edit split position window where you can enter the precise position of a split.
Delete	Deletes a marked index position or the position for a split audio file.

Split	Physically splits the audio file into two separate audio files at the marked position.
Play	Plays the audio file from the marked position. During playback, the Stop button is shown.
Stop	Stops playback of the audio file. If playback is stopped, the Play button is shown again.
Split at Index Positions	Splits the audio file at the set index positions.
Zoom In	Enlarges the graphical representation of the file.
Zoom Out	Reduces the graphical representation of the file.
Full View	Displays the graphical representation of the file to fit precisely into the oscilloscope area.

7.4.3 Filters tab

The **Filters** tab offers different filters that are applied to the audio file. The following check boxes are available:

Normalize	Sets the volume of the audio file to a specific level. The filter is suitable for bringing the volume of audio files from different sources into line with one another.
Deckclick	Removes clicking and scratching noises, like the noises on old LPs for example.
Hiss Reduction	Reduces or removes the hiss on a audio file. All frequencies below a certain threshold (hiss level) are removed.
Fade In	Fades in the the volume of an audio file from zero to full volume. The filter can be useful for shortening files.
Fade Out	Fades out the volume of an audio file from full volume to silence. This filter can be useful for shortening files.
Stereo Widening	Increases/reduces the stereo effect of an audio file. The filter only works if the original file was recorded in stereo.
Karaoke	Removes the vocal component of an audio file by removing audio components that are identical on both channels.
Echo	Contains options for echo effects.
Equalizer	Opens an equalizer so you can change the volume in different frequency ranges.


The **Test Selected Filters** button plays the audio file and applies the activated filters. During playback you can change the configuration options for the filters and so control the effect.

8 Burning a compilation

In order to burn your compilation, you must first select a recorder. Then start the burn process. Before Nero Burning ROM burns the disc, the **Burn Compilation** window is opened where you can select or check burn options.

8.1 Choose recorder

If you have installed multiple recorders, select a suitable recorder for burning. To do this, proceed as follows:

1. Click on the icon .
 - ➔ The **Choose recorder** window is opened.

2. Mark the relevant recorder.



The window shows useful information on the recorder, e.g. which disc types are supported.

3. If you would like to burn to a blank DVD, you can define the Book Type settings.



The Book Type determines which specification is recognized by the DVD player. With Nero Burning ROM you can define or change the Book Type. This is recommended particularly if your DVD player has difficulties with self-burned DVDs of the specification DVD-, DVD+ or DVD-RW. In this case, set the Book Type to **DVD-ROM**.

1. Click on the **Options** button.
2. Select the required option from the **Book Type Settings** drop-down menu.

Four Book Type settings are available:

Automatic: automatically selects the most suitable Book Type for this DVD.



DVD-ROM: sets the Book Type to DVD-ROM. Select this option if the DVD should play on multiple DVD players.

Physical disc type: selects the Book Type which is specified on the DVD.

Current recorder setting: leaves the Book Type setting to the recorder.

4. Click on the **OK** button.
 - ➔ The selected recorder is accepted and the **Choose recorder** window closed.
 - ➔ You have successfully selected a recorder.

8.2 Burn Compilation window

In the **Burn Compilation** window you can set or check the required burn options and then start the actual burn process.

The **Burn Compilation** window consists of a drop-down menu, a selection list, various tabs and buttons.

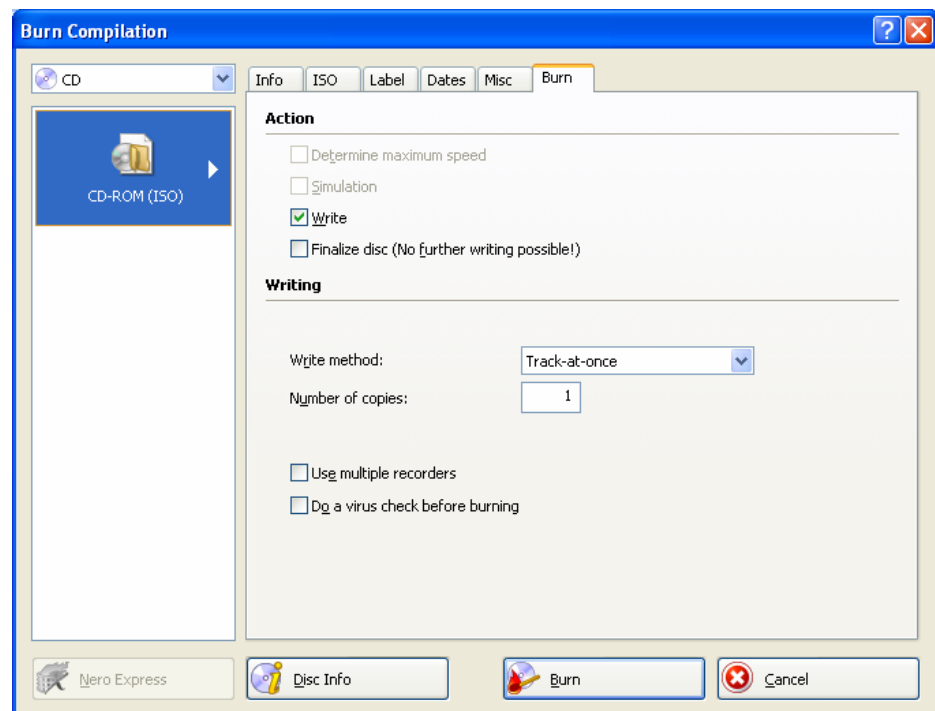


Fig. 6: **Burn Compilation** window for the disc type CD-ROM (ISO)

The selected disc format is displayed in the selection list. If multiple disc types are available for this disc format, and if you have installed a suitable recorder, you can select another disc type from the drop-down menu.

The following buttons are available:

Disc Info	Displays information on the disc inserted such as contents (if available) or available capacity for instance.
Burn	Starts the burn process if a recorder is connected. If a recorder is not connected, the Save Image File window is opened (see Creating an image file). This button is only available if the Burn check box is enabled.
OK	Accepts all changes and closes the window. This button is only available if the Burn check box is disabled.
Cancel	Closes the Burn Compilation window.

8.3 Burn tab

The **Burn** tab provides options for the burn process.

The following check boxes are available in the **Action** area:

Determine maximum speed	Determines how quickly the compiled files can be accessed.
Simulation	Simulates burning. In the process the simulation performs all steps that are also carried out during burning with the exception of setting the laser beam. A test determines whether there is a constant flow of data.
Write	Enables the Burn button.
Finalize disc	Closes or fixes the disc so that you cannot write to this disc anymore. Depending on the disc format, finalizing may be necessary. Nero Burning ROM automatically enables the check box for the relevant disc formats.



The speed test and simulation are not required for recorders that have a function for protecting against buffer underruns.

The following configuration options are available in the **Write method** area:

Write method	Selects the method used to burn the disc. Disc-at-once and track-at-once are available. Disc-at-once: burns the entire disc in one go without having to switch off the laser between individual audio files. Track-at-once: burns each audio file (track) separately onto the disc, i.e. that the laser is switched off and switched on again after each audio file.
Number of copies	Defines the number of discs that are to be burned. The default is set to one disc.
Buffer underrun protection	Provides buffer underrun protection. The check boxes are only available if the selected recorder supports a method for protecting buffer underruns.
Use Multiple Recorders	When you click on the Burn button, a window is opened in which you can select the desired recorders. The burn process is then carried out simultaneously on the selected recorders. This check box is not available for the disc type Audiobook CD.
Do a virus check before burning	Checks the files in the compilation for possible viruses before burning. The check box is not available for the disc types Audio-CD, VCD, SVCD and Audiobook CD.



Audio, Video and Super Video CDs should always be burned using the disc-at-once method. This entry is selected by default for these disc formats.

8.4 Starting the burn process

To start the burn process, proceed as follows:

1. Click on the **Burn** button in the main screen.
→ The **Burn Compilation** window is opened; the **Burn** tab is on top.
2. Check or select the options in the individual tabs.
3. Insert a corresponding blank disc and click on the **Burn** button.



Many CD players cannot read rewritable CDs (CD-RW). You should therefore use normal CD-ROMs for burning Audio CDs.

- The burn process starts.
On the screen a progress bar indicates the progress being made by the burn process.



During the burn process two check boxes are available:

Automatically shut down the PC when done: shuts down the computer after the burn process has finished (as long as this is technically feasible).

Verify written data: checks the data written to the disc after the burn process. You can use this option particularly when burning backups to ensure that all data has been written correctly.

- When the burn process has finished, a dialog box is opened.

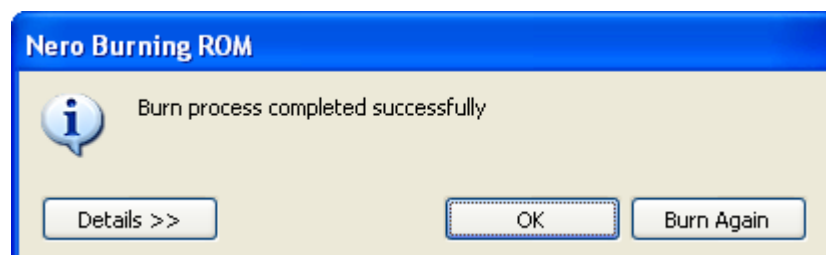


Fig. 7: "Burn process completed successfully" dialog box

4. If you would like to display the extended area with the event log, click on the **Details** button.
5. If you would like to start another burn process with the same compilation, click on the **Burn Again** button.
6. Click on the **OK** button.
→ The dialog box is closed.

→ You have successfully burnt a disc.

9 Bootable disc

Using Nero Burning ROM you can create a bootable disc with which the computer can be started without having to access the hard drive. For this reason a bootable CD is often used as an "emergency disc" to start the computer if it is not possible to access the hard drive.

Bootable discs are created in accordance with the "El Torito" standard, an extension to the ISO-9660 standard, which defines the structure of data discs. The CD contains a boot image and an ISO part. The boot image contains all files that are required to load the operating system and to start the computer. The ISO part can contain any number of data files that you can back up using this method.

9.1 Booting requirements

To ensure that a computer can boot from disc, the start sequence must be set in the BIOS of the computer in such a way that the drive is addressed first as the boot drive (start sequence CD-ROM, C, A for instance). In the case of a SCSI CD-ROM drive, this must be connected to a SCSI adapter with a separate BIOS whose settings can be modified accordingly. (This will only work when there are no IDE hard drives present as these precede the SCSI adapter in the boot sequence).

When booting from a disc, you can only start an operating system that does not write to the disc, such as "MS DOS" or "Linux". During booting Microsoft® Windows® 2000 and Microsoft® Windows® XP write to the disc from which they are being booted. This is not possible with a disc and so the process is canceled and the PC cannot be started.

9.2 Bootable disc template

For Nero Burning ROM the template for creating a bootable disc can be either a logical drive (e.g. the C: drive) or a drive image file, which contains the contents of a drive as a file sector for sector. If the template for the bootable disc is a logical drive, the boot disc will emulate this when the system is booting. There are three emulation types:

- Floppy emulation: this requires a bootable floppy disk for creating the boot disc. At startup the bootable disc emulates a floppy disk in drive A:. In the process, the drive letters increment, so that Drive A: corresponds to the bootable disc. Floppy disk drive A: can be accessed as B: after booting. The volume of the start data is limited by the capacity of the floppy disk (e.g. 1.44 MB).
- Hard drive emulation: a bootable hard drive is required to create the bootable disc. At startup the disc emulates Drive C:. All drive letters from Drive C: increment by one. The volume of the start data is limited by the capacity of the CD (e.g. 700 MB) or DVD (8.5 GB). If, for instance, you own a 200 GB hard drive with only one (200 GB) partition, you cannot create a bootable disc from it without re-partitioning your hard drive accordingly beforehand.
- No emulation: in this process the drive names are not changed. This type is used for bootable installation CDs. This setting is intended for users who do not require any floppy or hard drive emulation and who want to install their own device driver.

9.3 Creating and burning a bootable disc

To create a bootable disc, proceed as follows:

1. Click on the **New** button in the main Nero Burning ROM screen.
→ The **New Compilation** window is opened.
2. If you want to create a bootable CD, select the option **CD** from the drop-down menu and the option **CD-ROM (Boot)** from the selection list.
If you want to create a bootable DVD, select the option **DVD** from the drop-down menu and the option **DVD-ROM (Boot)** from the selection list.
→ The tabs for the bootable CD are displayed; the **Boot** tab is on top.
3. If the template data for the bootable disc should originate from a logical drive:
 1. Select the **Bootable logical drive** option button in the **Source of boot image data** area.
 2. Select the option you want from the drop-down menu.



If the logical drive you want does not appear in the drop-down menu, the reason for this is that the drive is bigger than the space available on the disc. Please note furthermore that for operating systems as of Microsoft® Windows® 2000 you need to have administrator rights in order to be able to access drives directly, which you will need to do if you are to create bootable discs.

4. If the template data for the bootable disc should originate from an image file:
 1. Select the **Image file** option button in the **Source of boot image data** area.
 2. Click on the **Browse** button and select the desired image file.
 3. Select the language that should appear while the system is booting from the **Boot locale** drop-down menu.
 4. Enable the **Enable expert features** check box and select the emulation type for the image file from the **Emulation type** drop-down menu.
5. Select any other options required in the tabs (see New Compilation window).
6. Click on the **New** button.
→ The selection screen is displayed.
7. Select the files/folders that should be written to the ISO part of the bootable disc and drag them into the Compilation Area.
→ The files/folders are displayed in the compilation area and the capacity bar indicates how much storage space is required on the disc.
8. Start the burn process (see [Starting the burn process](#)).
→ You have successfully burnt a bootable disc.

10 Image file

You can use Nero Burning ROM and Nero Image Recorder to create an image file. Nero Image Recorder is automatically installed while Nero Burning ROM is being installed. An image file is an individual file on the hard drive that contains an image of a complete disc. You can burn copies of this image file as often as you like. The image file is exactly the same size as the original files.



The following estimate applies to Audio CDs: the image file requires a capacity of approximately 10 MB for every minute of audio data.

10.1 Creating an image file

To create an image file, proceed as follows:

1. Click on the **New** button.
2. Create a new compilation of your choice (see [New compilation](#)).




Using Nero Burning ROM you can also create image files for disc types that the installed recorder cannot burn. You can enable this function via the **File > Options > Expert Features** menu, **Enable all supported recorder formats for image recorder** check box. The drop-down menu in the **Compilation** window then makes available all supported disc types (CD, DVD, HD DVD and Blu-ray disc).

3. Select the files that you want to burn (see [Selecting files](#)).
4. If you have installed multiple recorders, select Nero Image Recorder from the drop-down menu.
5. Click on the **Burn** button.
 - ➔ The **Burn Compilation** window is opened, the **Burn** tab is on top.
6. Click on the **Burn** button.
 - ➔ The **Save Image File** window is opened.
7. Specify a file name and a storage location for the image file and click on the **Save** button.
 - ➔ The image file is created and saved in the selected storage location. On the screen, a progress bar indicates the progress made while the file is being created. Once the create process is over, a dialog box is opened.
8. Click on the **OK** button.
 - ➔ The dialog box is closed, you have successfully created the image file.

10.2 Burning an image file

To burn a saved image file, proceed as follows:

1. Select a recorder from the drop-down menu (not Nero Image Recorder).
2. Click on the  button in the main screen.
 - ➔ The **Open** browser window is opened.
3. Select the desired image file and click on the **Open** button.

- ➔ The **Burn Compilation** window with the **Burn** tab is opened.
- 4. Proceed with the burn process (see [Burning a compilation](#)).
 - ➔ You have successfully burnt an image file.

11 Copying discs

You can copy discs using Nero Burning ROM. There are two methods for this:

- On-the-fly copying
- Copy over image

Each method has advantages and disadvantages which will depend on your requirements.

11.1 On-the-fly copying versus copy over image

11.1.1 On-the-fly copying

When using the on-the-fly method, insert the original disc into a drive and a blank disc into the recorder. The original disc in the drive is copied immediately without any time delay to the blank disc in the recorder. The on-the-fly method allows you to copy very fast and does not require any additional space on the disc.

In order to be able to use the on-the-fly method, you will need at least two drives: one for reading the disc and a recorder for burning. The following requirements apply to the drive and recorder:

- The recorder must have a function for protecting against buffer underruns or the drive must be capable of delivering the data sufficiently fast. The read speed must be at least as high as the write speed to ensure that a buffer underrun does not occur. It is more reliable when the read speed is twice as fast as the write speed.
- The drive must be capable of delivering information on the number and type of sessions, otherwise Nero Burning ROM may not be able to produce an exact copy.

On-the-fly copying can have the following disadvantages:

- If the recorder does not have a function for protecting against buffer underruns, the on-the-fly method is highly sensitive to read errors. The reason for this is as follows: if errors occur while the disc is being read because it is scratched, it is not possible to try to eliminate the error by reading the disc several times for example because, in contrast to the copy-over-image method, there is not enough time (danger of buffer underrun).
- Index positions in audio files get lost. The reason for this is as follows: index positions only become identifiable if the corresponding position on the CD is read. However, quick copies can only be burned using the disc-at-once method. With this method the information on the index positions must be available before the burn process begins. This means that Nero Burning ROM cannot copy over index positions.
- The quality of audio data read in may suffer. The reason for this is as follows: Nero Burning ROM reads several megabytes of data at a time from the drive, transfers the data to the Nero Burning ROM buffer and writes the data to the recorder. If the data transfer slows down because the buffer in Nero Burning ROM is full for instance, the reading head of the drive has to jump back to a previous position. Some drives cannot position the reading head precisely for Audio CDs, which means that corrupt audio data may be transferred sometimes.

11.1.2 Copy over image

With the copy-over-image method, an image of the original disc is saved to a file first. The image file is then burned to a blank disc. Copying using an image copy takes longer, but often produces better results.

You must have sufficient space on the disc to use the copy-over-image method (see [Image file](#)).

Copying using an image copy is particularly suitable in the following situations:

- Only one drive is available
- You would like to make several copies of the same CD
- You think it likely that read errors may have occurred on the source CD (for example because it is scratched)
- You appreciate the best possible reproduction (particularly in relation to index positions and the quality of Audio CDs).

11.2 Compilation window

In the **Compilation** window, define the options for copying at the beginning of the copy procedure. You can use the **Copy** button to open the window.

The **New Compilation** window consists of a drop-down menu, various buttons and tabs.

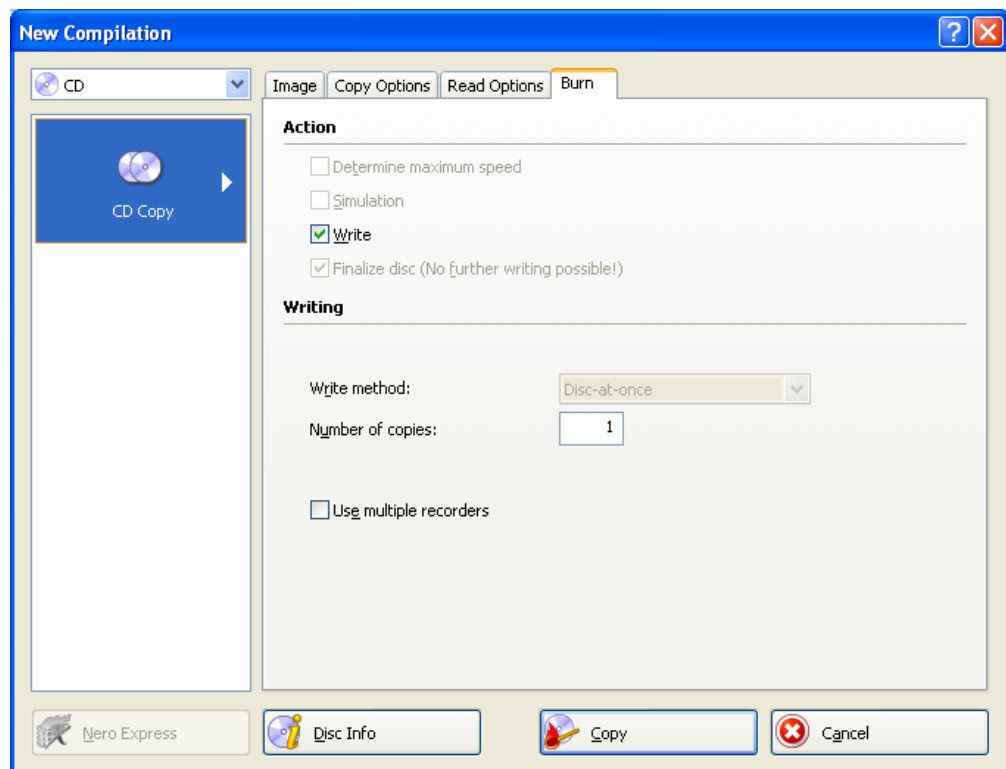


Fig. 8: **Compilation** window, Copy

The drop-down menu contains the options **CD**, **DVD**, **HD DVD** and **Blu-ray Disc**. Only those disc types supported by the recorder are displayed. If the recorder can only burn CDs, the drop-down menu is grayed out.

The following buttons are available:

Disc Info	Displays information on the disc inserted such as contents (if available) or available capacity for instance.
Copy	Starts the copy process.
Cancel	Closes the New Compilation window.

The following tabs are available:

Image	Displays the path to the temporary image file and provides information on the speed of the hard drive (see Image tab).
Copy Options	Contains options for configuring copying (see Copy Options tab).
Read Options	Contains options for configuring reading of the original disc (see Read Options tab).
Burn	Contains options for configuring the burn process (see Burn tab).

11.2.1 Image tab

The **Image** tab provides the two areas **Image file** and **Hard drive speed info**. The **Image file** area is only enabled, if the **On-the-fly** check box is disabled on the **Copy Options** tab.

In the **Image file** area the path to the temporary image file is displayed and the following configuration options are available:

Browse	Opens the Save As window where you can specify a file name and a directory where the temporary image file should be stored.
Delete image file after disc copy	Deletes the temporary image file when the copy process is finished.

In the **Hard drive speed info** area the available drives or hard drives are shown in a list. The following button is available:

Test Speeds	Tests the speeds of the available drives and adds the speed found to the list.
--------------------	--

11.2.2 Copy Options tab

The following configuration options are available on the **Copy Options** tab:

General area	
On-The-Fly	Creates the copy using the on-the-fly method. If the check box is disabled, the copy is created using the copy-over-image method.
Source area	
Drive	Selects the drive for reading the disc. If a copy over image is created, we recommend that you select the recorder for reading in.
Read speed	Defines the speed at which the disk is read in.

11.2.3 Read Options tab

You can select options for reading the original disk on the **Read Options** tab. The following options are available:

Profile area	
Profile selection	Selects predefined copy options or a user-defined setting. In the case of predefined copy settings Nero Burning ROM sets the configuration options automatically. You can select the configuration options yourself in the case of a customized setting.
Data Track area for the disc type CD	
Ignore read errors	Ignores read errors on the original disc and continues the read process. If the check box is disabled, Nero Burning ROM may interrupt the burn process depending on the type of error that occurs.
Write defect sectors	Still passes on corrupt sectors (that have caused read errors) for burning. If the check box is disabled, corrupt sectors are not passed on and remain blank.
Read sectors in raw mode	Reads PQ subchannel data.
Read all subchannel data	Reads all subchannel data.
Audio tracks area for disc type CD	
Ignore read errors	Ignores read errors on the original disk and resumes the read process. If the check box is disabled, Nero Burning ROM may interrupt the burn process depending on the type of error.
Read indexes of audio data	Reads the audio file indexes.
Read all subchannel data	Reads all subchannel data.
Advanced area for the disc type CD	
Read Media Catalog Number and ISRC	Reads the media catalog number, a unique number worldwide for compilations and the ISRC (International Standard Recording Code), a unique number worldwide for audio recordings.
Use jitter correction	Removes scratches from audio and video files.
Error correction area for disc type DVD	
Read with error correction	Performs error correction while reading. In the process, the checksum of a corrupt sector is adjusted so that the sector in itself is consistent.
Read retry count	Establishes the number of attempts that are made to correct errors.
Fast reading without error correction	Performs fast reading without error correction.
Handling of non-correctable read errors area for disc type DVD	
Ignore read errors	Ignores read errors on the original disc. If the check box is disabled, Nero Burning ROM may interrupt the burn process depending on the type of error.



With certain disc formats such as Video CD and Audio CD for instance, read errors often have little or no impact because they are not perceptible when the CD is played.



Subchannel data contains additional information such as CD Text or information on positions for instance.

11.3 Copying a disc



If you are not in possession of the copyright of the relevant disc and do not have authorization from the owner of the copyright, unauthorized copying violates national and international legislation.



Copy-protected Audio CDs cannot be copied using Nero Burning ROM.

To copy a disc, proceed as follows:

1. Click on the **Copy** button in the main screen.

→ The **New Compilation** window is opened

2. Select the disc type you want from the drop-down menu.



Your installed recorder or drive will determine which disc type (**CD**, **DVD**, **HD DVD** and/or **Blu-ray Disc**) you can select. If the recorder can only burn CDs, the drop-down menu is grayed out. But with Nero Image Recorder, which is installed in Nero Burning ROM, you will always be able create an image (see [Image file](#)) even if you have not installed a recorder.

3. Select the options required in the tabs (see [Compilation window](#)).

4. If you want to copy discs using the copy-over-image method:

1. Disable the **On-the-fly** check box on the **Copy Options** tab.

2. Insert the disc that you want to copy into the recorder.

3. Click on the **Copy** button.

→ A screen is displayed and a progress bar indicates the progress made while the temporary image file is being created. When the image file has been created, the disc is ejected. The **recorder name: Waiting for Disc** window is opened.

4. Remove the ejected original disc and insert the blank disc.

→ The burn or copy process starts.

On the screen a progress bar indicates the progress being made during the burn or copy process.

5. If you want to copy using the on-the-fly method:

1. Enable the **On-the-fly** check box on the **Copy Options** tab.

2. Select the drive that is to contain the disc to be copied from the **Drive** drop-down menu.

3. Insert the disc that you want to copy into the selected drive.

4. Insert a blank disc.

5. Click on the **Copy** button.

- The burn or copy process starts.
On the screen a progress bar indicates the progress being made during the burn or copy process.
- 6. Proceed with the burn process (see [Starting the burn process](#)).
- You have successfully copied a disc.

12 Audio database

In Nero Burning ROM you can create, edit and use audio databases. The database files contain information on the title, artist and audio files of an Audio CD. You can also use the database from the www.freedb.org web page; Nero Burning ROM provides an interface for this.

12.1 Creating an audio database

In order to be able to use a database in Nero Burning ROM, you must first create it. Nero Burning ROM provides two types of database:

- Program database
- User database

12.1.1 Creating a program database

You can use Nero Burning ROM to create a program database. The program database is filled with entries from the Internet database on the www.freedb.org web page. Once you have created the program database, it is located locally on your hard drive.

The advantage over use of the interface is that you have fast read access to the database and can also change the entries in the database. The disadvantage however is that the program database cannot be updated automatically. In order to record information on recently issued Audio CDs, you must re-import the database or add the Audio CD to the database manually (see [Adding a database entry](#)).

There are two steps involved in the creation of a program database in Nero Burning ROM:

- Download a database from the Internet
- Import this database to Nero Burning ROM

In order to create the program database, proceed as follows:

1. Download the database from the www.freedb.org web page and save the database on your hard drive.



The database is at least 160 MB. The database is not downloaded in Nero Burning ROM. Nero AG is not responsible for the www.freedb.org web page, but just provides an interface to it.

2. Click on the on the **Database > Import Internet Database** menu in the main Nero Burning ROM screen.

→ A dialog box is opened informing you that the import may take several hours.



The length of time taken by the import is explained by the sheer size of the database and the numerous cross references that Nero Burning ROM creates. Although you can cancel the procedure at any time, we advise against it because the procedure cannot be resumed. The database would have to be imported again, which would involve duplicate entries.

3. Click on the **Yes** button.

→ A dialog box is opened which prompts you to download the database files from www.freedb.org.

4. Click on the **OK** button.

→ The **Browse Folder** window is opened.

5. Specify the directory containing the downloaded database files and click on the **OK** button.
 - ➔ The **Browse Folder** window is opened.
 6. Specify the directory in which Nero Burning ROM should create the database, and click on the **OK** button.
 - ➔ The **Current Operation** window is opened and the database is created. Once the database has been created, the window is closed and a dialog box prompts you to confirm the database as your new program database.
 7. Click on the **Yes** button.
 - ➔ The dialog box is closed.
- ➔ You have successfully imported the Internet database. The **Database** menu contains the options **Open Program CD Database** and **Open Program Title Database**.

12.1.2 Creating a user database

Using Nero Burning ROM you can create a user database and fill it with your own entries. The user database is often used to store information on your own Audio CD collection and to record information on self-burned Audio CDs.

In order to create the user database, proceed as follows:

1. In the main Nero Burning ROM screen click on the **Database > Create New User Database** menu.
 - ➔ The **Browse Folder** window is opened.
 2. Select a destination path for the user database and click on the **OK** button.
 - ➔ The **Current Operation** window is opened. After the database has been created, the window is closed and a dialog box prompts you to confirm this database as your new user database.
 3. Click on the **Yes** button.
 - ➔ The dialog box is closed.
- ➔ You have successfully created a user database. The **Database** menu contains the options **Open User CD Database** and **Open User Title Database**.

12.2 Database window

The **Database** window is the starting point for editing an entry in the database or adding a new entry. Nero Burning ROM has two database windows:

- The **Nero CD Database** window with the imported database files in the program database.
- The **User CD Database** window with customized database files from the user database.

Both database windows look the same and have the same functions.

The **Database** window consists of two lists and different input options. You can open the window via the **Database > Open Program/User CD Database** menu.

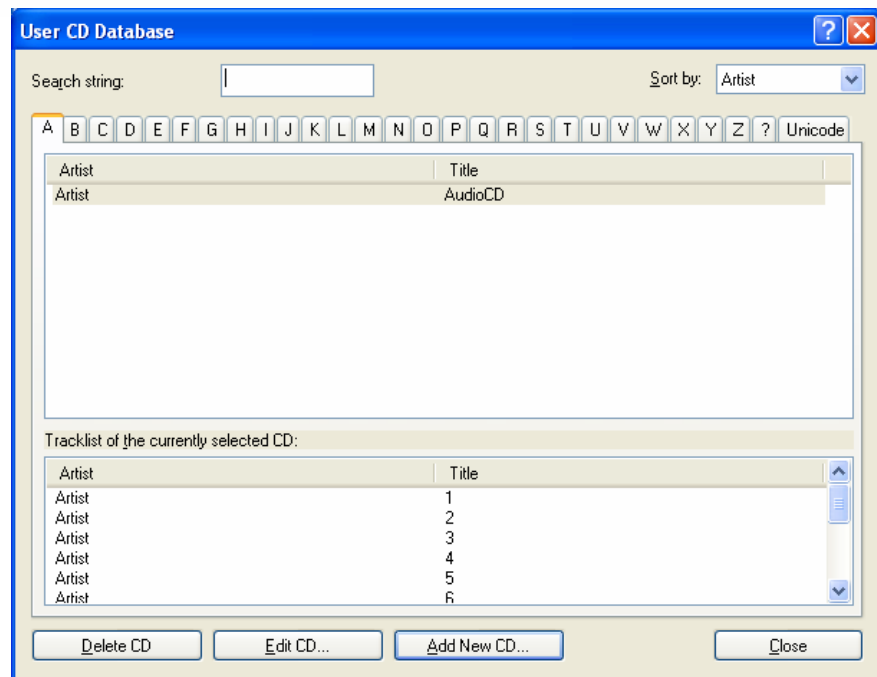


Fig. 9: Nero CD Database window

The top list displays artists and titles on a CD in alphabetical order. You can select initial letters with the aid of tabs. The audio files of the marked CD are shown in the bottom list **Tracklist of the currently selected CD**.

The following configuration options are available:

Search string	Displays the relevant tab after you enter a letter.
Sort by	Sorts the top list in alphabetical order. The options Artist and Title are available: Artist : sorts the list according to the artist. Title : sorts the list according to title.
Delete CD	Deletes the selected CD entry from the database.
Edit CD...	Opens the Create a New CD Entry window where you can view and change the entry for the selected CD.
Add New CD...	Opens the Nero's Title and CD Database window. You can select, create and edit an entry here.
Close	Closes the window.

12.3 Nero's Title and CD Database window

The **Nero's Title and CD Database** window always refers to an inserted Audio CD. It contains the search result and is opened if you want to add a new entry to the database in the **Database** window. It is also opened with one of the following actions if you have set the database usage accordingly (see [Defining database usage](#)):

- When copying an Audio CD
- When saving audio files on an Audio CD
- When adding an audio file to an audio compilation



Nero Burning ROM searches in the program database, the user database and the Windows® Media Player database as well as in the Internet database on request.

During the search, either multiple CDs may be found, a "wrong" CD or no CDs at all.

Multiple CDs are found if different CDs have the same "fingerprint". This "fingerprint" is obtained from the start positions on the individual audio files, the number of audio files and the playing time of the CD. Occasionally, different CDs may have the same characteristics. It is then not possible to distinguish them.

If a wrong CD is found, or no CD at all, the Audio CD is not yet stored in the database.

The window contains editing and selection functions for the database entries found and two lists. The search result (always performed before the window is opened) is shown in the **List of corresponding CD entries in the Nero CD database**. A small icon always indicates the origin of an entry. The audio files of the selected CD are shown in the **Tracklist of the currently selected CD** list.

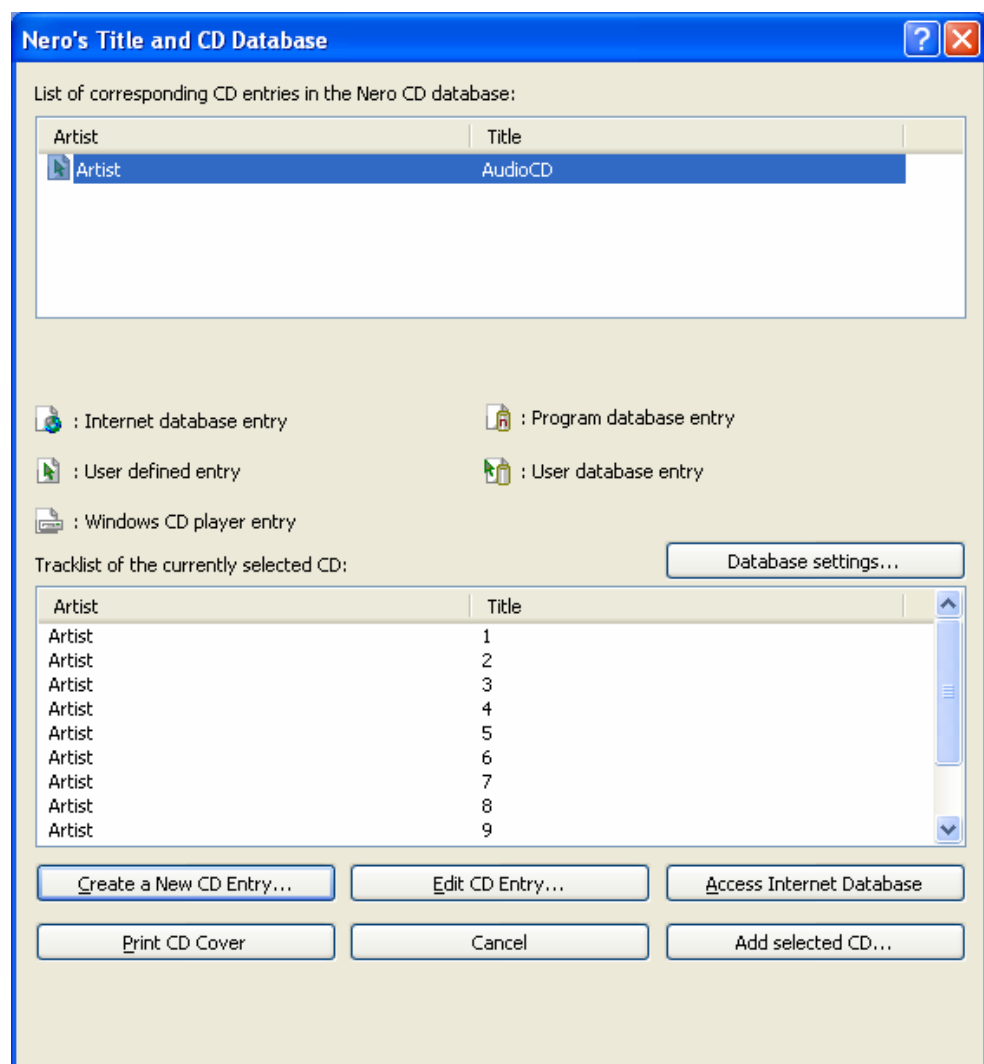


Fig. 10: Nero's Title and CD Database window

The window contains the following buttons:

Database settings...	Opens the Options window with the Database tab where you can specify the paths for the databases.
Create a New CD Entry...	Opens the Create a New CD Entry window where you can create a new entry.
Edit CD Entry...	Opens the Create a New CD Entry window where you can view and change the entry for the selected CD.
Access Internet Database	Establishes a connection with the Internet database www.freedb.org and performs a search for the Audio CD that has been inserted.
Print CD Cover	Opens Nero CoverDesigner. The information on the selected entry such as title, number and names of the audio files is added to the document data.
Cancel	Closes the window.
Add selected CD...	Adds the selected entry to the database and closes the window. This button is only available if the window was opened via the database window.
Selected CD	Adds the information on the selected entry and closes the window. This button is only available if the window was opened with an action (see Using a database).

12.4 Create a New CD Entry window

The **Create a New CD Entry** window refers to a database entry. Information on the CD title and the individual audio files is displayed for the database entry. The window is opened if you want to edit an existing database entry or add a new entry to the database. With the latter the input fields are still empty.

Fig. 11: **Create a New CD Entry** window

The window consists of a drop-down menu, six text boxes, six check boxes and buttons.

The drop-down menu contains the options **CD Title** and **Track**. The track entries correspond to the audio files of the CD.

In the text boxes you can enter the relevant information on the CD title or on an audio file. The text boxes each refer to the entry which is selected in the drop-down menu.

The area **Autocopy the following information from the CD title entry to the track entries** is only available if you selected the **CD Title** entry from the drop-down menu. In this area you can define which of the entries you made for the CD title are added to the text boxes for the audio files.

The following buttons are available:

Back	Jumps back one entry in the drop-down menu and offers the text boxes for this entry.
Next	Jumps forward one entry in the drop-down menu and offers the text boxes for this entry.
OK	Adds the changes to the databases and closes the window.
Cancel	Cancels the procedure and closes the window.



The database entry can only be stored when the text boxes for title, artist and genre have all been filled in for the CD title.

12.5 Changing a database entry

To change an entry, proceed as follows:

1. If you want to open the program database, click on the **Database > Open Program CD Database** menu.
→ The **Nero CD Database** window is opened.
2. If you want to open the user database, click on the **Database > Open User CD Database** menu.
→ The **User CD Database** is opened.
3. Click on the **Edit CD...** button.
→ The **Create a New CD Entry** window is opened. The **CD Title** entry is selected in the drop-down menu. The text boxes for the CD title are displayed.
4. Edit the information in the text boxes **Title**, **Artist**, **Producer**, **Comment**, **Genre** and **Year** according to your requirements.
5. Use the check boxes to define what information is to be added to the text boxes for the individual audio files.
6. Click on the **Next** button.
→ The entry **Track 1** is selected in the drop-down menu. The text boxes for the first audio file are displayed.
7. Edit the information in the text boxes according to your requirements.
8. Repeat both of the previous steps for all audio files.



The database entry can only be saved if the text boxes for title, artist and genre have been filled in for the CD title and all audio files.

9. Click on the **OK** button.
 - The changes are incorporated and the window is closed.
 - You have successfully changed an entry in the database.

12.6 Adding a database entry

Using Nero Burning ROM you can add a new entry to your database. The new entry always refers to an Audio CD that has been inserted. To add an entry to the program or user database, proceed as follows:

1. If you want to open the program database, click on the **Database > Open Program CD Database** menu.
 - The **Nero CD Database** database window is opened.
2. If you want to open the user database, click on the **Database > Open User CD Database**.
 - The **User CD Database** database window is opened.
3. Insert the Audio CD to which the entry is to refer.
4. Click on the **Add New CD...** button.
 - A dialog box is opened reminding you that Nero Burning ROM requires access to a CD for this function.
5. Click on the **OK** button.
 - The **Waiting for Disc** window is opened. Nero Burning ROM performs a search in the background to find an entry for a corresponding Audio CD. When Nero Burning ROM has finished searching the **Nero's Title and CD Database** is opened. The search result is shown in the **List of corresponding CD entries in the Nero CD database** list.
6. If you want to search through the Internet database www.freedb.org as well, click on the **Access Internet Database** button.
 - Nero Burning ROM performs the search in the Internet database and adds the search result.
7. If the Audio CD does not appear in the **List of corresponding CD entries in the Nero CD database** list, you can create a new entry:
 1. Click on the **Create a New CD Entry** button.
 - The **Create a New CD Entry** window is opened. The entry **CD Title** is selected in the drop-down menu. The text boxes for the CD title are displayed.
 2. Enter the required information in the text boxes **Title, Artist, Producer, Comment, Genre** and **Year**.
 3. Define in the check boxes what information will be added to the text boxes for the individual audio files.
 4. Click on the **Next** button.

- The entry **Track 1** is selected in the drop-down menu. The text boxes for the first audio file are displayed.
- 5. Enter the required information in the text boxes.
- 6. Repeat the two previous steps for all audio files.
- 7. Click on the **OK** button.
 - The **Create a New CD Entry** window is closed and the new entry created is added to the **List of corresponding CD entries in the Nero CD database** in the **Nero's Title and CD Database** window.
- 8. Select the required entry and click on the Add selected CD... button.
 - The **Nero's Title and CD Database** window is closed and the new entry is added to the database. A dialog box containing the message "The new entry has been successfully added to the database" is opened.
- 9. Click on the **OK** button.
 - The dialog box is closed.
- You have successfully added an entry to the database.

12.7 Defining database usage

The information from the databases can be used for various actions:

- When copying an Audio CD
- When saving audio files on an Audio CD
- When adding an audio file to an audio compilation

In addition, an entry that you added to the database can also be uploaded to the Internet database www.freedb.org.

In order to define when the database is used, you must define usage on the **Misc** tab in the **Options** window. To do this, proceed as follows:

1. Click on the **File > Options** menu.
 - The **Options** window is opened.
2. Click on the **Misc** tab.
 - The **Misc** tab is opened with the display area **Options**.
3. Scroll down to the **Database** entry.
4. Define whether the database is to be used when copying an Audio CD with the subentry **Retrieve artist/title information from the Nero/Internet CD database when copying an Audio CD**:
 1. If you want the databases to be searched, select the option button **Always**.
 2. If you want Nero Burning ROM to be asked whether the databases should be searched, select the option button **Prompt**.
 3. If you do not want the databases to be searched, select the option button **Never**.
5. Define whether the database should be used when you are saving audio files on an Audio CD with the subentry **Retrieve artist/title information from the Nero/Internet CD database when saving audio tracks**:

1. If you want the databases to be searched, select the option button **Always**.
2. If you want Nero Burning ROM to ask whether the databases should be searched, select the option button **Prompt**.
3. If you do not want the databases to be searched, select the option button **Never**.
6. Define whether the database should be used when adding audio files to an audio compilation with the subentry **Retrieve artist/title information from the Nero/Internet CD database when adding a track to the audio compilation**:
 1. If you want the databases to be searched, select the option button **Always**.
 2. If you want Nero Burning ROM to ask whether the databases should be searched, select the option button **Prompt**.
 3. If you do not want the databases to be searched, select the option button **Never**.
7. Define what happens when you have added a new entry to the database with the subentry **Submit new entries**:
 1. If you want the new entry to be uploaded to the Internet database www.freedb.org, select the option button **Always**.
 2. If you want Nero Burning ROM to ask whether the new entry should be uploaded to the Internet database www.freedb.org, select the option button **Prompt**.
 3. If you do not want the new entry to be uploaded to the Internet database www.freedb.org, select the option button **Never**.



We recommend that you only make available new entries to the general public on the Internet if they involve original CDs acquired by purchase and not Audio CDs that you have compiled yourself. In addition, the information about the CD should be complete and correct.

Nero AG is not responsible for the Internet database www.freedb.org, but only provides an interface to it.

8. Click on the **OK** button.
 - ➔ The changes will be accepted and the **Options** window closed.
 - ➔ You have successfully configured database usage.

12.8 Using a database

You can use the databases for the following actions:

- When copying an Audio CD
- When saving tracks on an Audio CD
- When adding a track to an audio compilation

Requirements:

You have defined the usage types **Always** or **Prompt** (see [Defining database usage](#)).

1. You are performing one of the above actions.
 - ➔ The **Nero's Title and CD Database** window is opened, which displays the search result.
2. If you want to search the Internet database www.freedb.org as well, click on the **Access Internet Database** button.
 - ➔ Nero Burning ROM searches the Internet database and adds the search result.

3. If the Audio CD does not appear in the **List of corresponding CD entries in the Nero CD database** you can create an entry for this CD:
 1. Click on the **Create a New CD Entry...**
 - The **Create a New CD Entry** window is opened. The **CD Title** option is selected in the drop-down menu. The text boxes for the CD title are displayed.
 2. Enter the required information in the text boxes **Title, Artist, Producer, Comment, Genre** and **Year**.
 3. Define in the check boxes which information is to be added to the text boxes for the individual audio files.
 4. Click on the **Next** button.
 - The **Track 1** entry is selected in the drop-down menu. The text boxes for the first audio file are displayed.
 5. Enter the required information in the text boxes.
 6. Repeat both of the previous steps accordingly for all audio files.
 7. Click on the **OK** button.
 - The **Create a New CD Entry** window is closed and the new entry is added to the **List of corresponding CD entries in the Nero CD database** in the **Nero's Title and CD Database** window.
4. Select the required entry and click on the **Selected CD** button.
 - The **Nero's Title and CD Database** window is closed and the information for the entry is accepted.
- You have successfully used the database.

13 Saving and converting audio files

Using Nero Burning ROM you can convert an Audio CD into a format you require and save it to the hard drive. You can also convert (transcode) audio files saved on the hard drive into a different format.

13.1 Save Tracks window

In the **Save Tracks** window you can define the settings for the audio files that are to be stored on the hard drive. The window consists of a track list, control buttons and various configuration options. You can open the window by clicking on the **Extras > Save Tracks** menu.

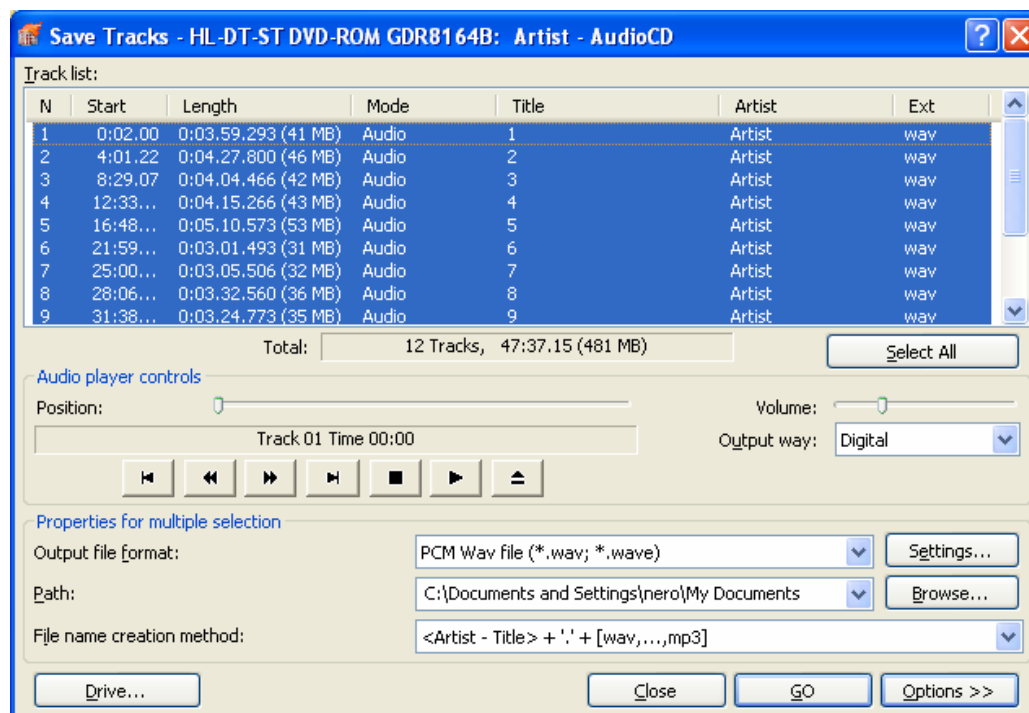


Fig. 12: **Save Tracks** window

The track list displays the audio files on the Audio CD. The functions of the control buttons correspond to the familiar control buttons on CD players.

The following configuration options are available in the **Properties for multiple selection** area:

Output file format	Selects the output audio format for the selected audio file.
Settings...	Opens a window where you can define options such as bit rate and frequency for the output audio file.
Path	Selects the storage location for the output file.
Browse	Opens a browser window where you can select a storage location.
File name creation method	Selects the method to be used for creating the name of the output file.

The following buttons are available:

Select All	Selects the entire track list, i.e. all audio files.
Drive...	Opens a selection list containing the entries Refresh , Change drive and Eject .
Close	Closes the window.
Go	Starts the save process.
Options >>	Opens the extended area.

The following configuration options are available in the extended area.

Jitter Correction	Synchronizes data information by overlapping sectors. This prevents gaps from occurring.
Remove silence	Removes silence from the end of an audio file.
Automatically generate an M3U playlist of stored audio tracks	Generates a playlist of the audio files that are stored on the hard drive. The M3U file format compiles media files into a list.
Read speed	Defines the speed at which the drive reads the files.

13.2 Saving audio files

Using Nero Burning ROM you can store audio files from an Audio CD on the hard drive. In the process, the files are encoded, i.e. converted into a format that the computer can read. Mostly, the audio file is compressed.



Audio files from copy-protected Audio CDs cannot be saved using Nero Burning ROM.

To save audio files, proceed as follows:

1. Insert the desired Audio CD into a drive.
2. Click on the **Extras > Save Tracks** button.
→ The **Save Tracks** window is opened.
3. Select the audio files that you want to save in the **Track list**.



If you want to save all tracks, simply click on the **Select All** button.

4. Select the required output format from the **Output file format** drop-down menu.
5. If you want to define the encoding options:
 1. Click on the **Settings...** button.
→ A window is opened.
 2. Depending on the selected output form, define the encoding options such as bit rate, encoding quality and frequency.
 3. Click on the **OK** button.
→ The window is closed and the changes accepted.

6. If you want to specify a storage location for the output files, click on the **Browse...** button and select a path.
7. Select a **File name creation method**.



The default setting for the method for default names is **Manual**. If you select **User defined**, enter the desired name for the audio file.

8. If you want to perform settings in the extended area, click on the **Options** button.
 - The extended dialog box is opened.
9. Click on the **Go** button.
 - Conversion starts. The **Progress** window is opened and displays the progress made while saving. At the end of the save process, it is closed automatically.
10. Click on the **Close** button.
 - The **Save Tracks** window is closed.
 - You have saved individual audio files or an entire Audio CD to your hard drive.

13.3 Encode Files window

In the **Encode Files** window, the audio files that are to be encoded are selected and the properties for the output defined. You can open the window via the **Extras > Encode Files** menu.

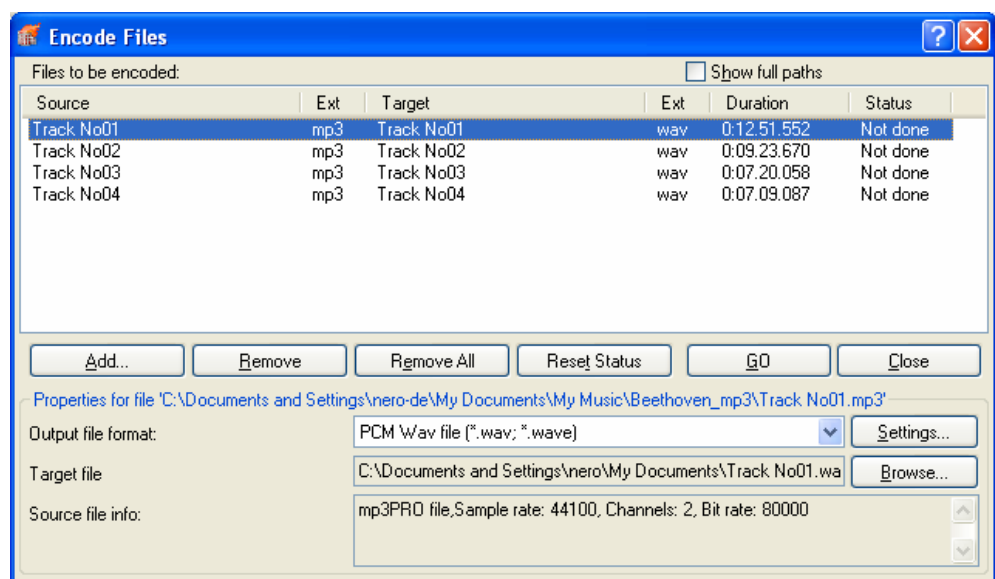


Fig. 13: **Encode Files** window

The window consists of a selection area and a properties area.

In the selection area the selected files are displayed in the **Files to be encoded** list. The following buttons and check boxes are available:

Show full paths

Displays the full source and destination paths for the files in the **Files to be encoded** list.

Add...	Opens the browser window where you can select a file to add it to the list of files to be encoded.
Remove	This removes the selected file.
Remove All	Removes all files from the list of Files to be encoded .
Reset Status	Resets the status of the selected file to "to do".
Go	Starts the encode process.
Close	Closes the window.

The following configuration options are available in the **Properties** area:

Output file format	Selects the output audio format for the selected audio file.
Settings	Opens a window where you can define options such as bit rate and frequency for the output audio file.
Target file/ Target directory	Displays the storage location of the output file or output files.
Browse...	Opens a browser window where you can select a storage location.
Source file info	Displays information on the selected audio file.

13.4 Converting audio files

Using Nero Burning ROM you can transcode, i.e. convert audio files that are stored on the hard drive into a different format.

To transcode a file, proceed as follows:

1. Click on the **Extras > Encode Files** menu.
→ The **Encode Files** window is opened.
2. Click on the **Add** button.
→ The familiar browser window **Open** is opened.
3. Select the required file and click on the **Open** button.
4. Repeat the two previous steps for each file that you want to convert.
5. Select the required output format from the **Output file format** drop-down menu.
6. If you want to define encoding options:
 1. Click on the **Settings...** button.
→ A window is opened.
 2. Depending on the output format, define the encoding options such as bit rate, encoding quality and frequency.
 3. Click on the **OK** button.
→ The window is closed and the changes accepted.
7. If you want to specify a storage location for the output files, click on the **Browse...** button and select a path.
8. Click on the **Go** button.

- ➔ The **Progress** window is opened and displays the progress made while saving. At the end of the save process, the window is closed automatically. The status of the file that was transcoded is set to "**Finished**".
- 9. Click on **Close**.
 - ➔ The **Encode Files** window is closed.
 - ➔ You have successfully transcoded your audio files.

14 LightScribe®

If you have connected up a LightScribe recorder, you can also use Nero Burning ROM to print on the label side of a LightScribe® CD/DVD. The label side of the disc has a special color or thermal layer, which is altered by the heat from the laser in the recorder allowing images and text to be printed on it.



This function is only available with a LightScribe® recorder.

Using LightScribe® Direct Disc Labeling

Your computer requires the latest LightScribe® System Software if you are using a CD/DVD drive which supports LightScribe®.

Please install the LightScribe® System Software separately if you have installed a newer version of Nero 7 from the Nero website. You can find the latest version under www.nero.com/link.php?topic_id=93.

14.1 CD Label Editor window

In the **CD Label Editor** window you can create or load a label. The window is opened when you click on the **Create** button on the **Misc** tab for the current compilation in the **LightScribe** area.



The interface in the **CD Label Editor** window works on the same principle as Nero CoverDesigner. Basically, it is irrelevant whether you print the label on paper or directly onto an appropriate disc.

Please see the separate Nero CoverDesigner User's Guide for full instructions on how to make professional looking covers and labels.

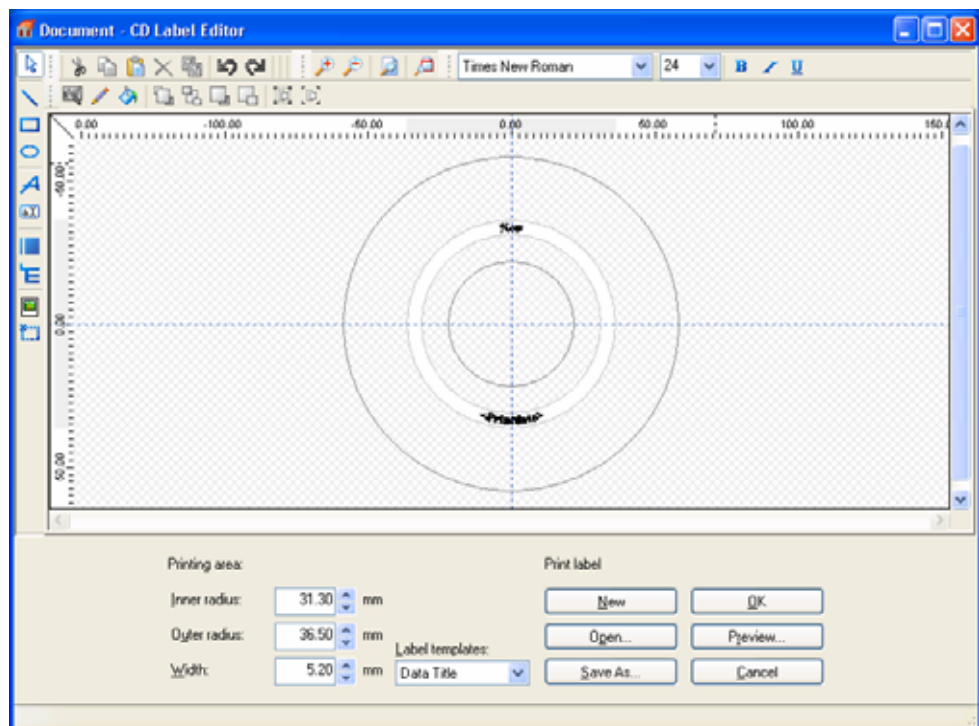


Fig. 14: **CD Label Editor** window for LightScribe®

The following options are available:

Inner radius	Defines the distance between the label and the inner edge.
Outer radius	Defines the distance between the label and the outer edge.
Width	Defines the width of the print area.
Label templates	Contains a selection of different templates for designing the label. You can continue to edit and customize a selected template.
New	Generates a new label document.
Open...	Opens an existing label, which was created using Nero CoverDesigner.
Save As...	Saves the label you have created.
OK	Adds the label you created to the compilation and closes the window.
Preview...	Opens the Print Preview window that shows how the label should appear on the LightScribe® disc.
Cancel	Cancels the procedure and closes the window.

14.2 Printing labels

The process for printing the label is integrated into the usual burn process. First, burn the compilation, flip the disc over and then burn the label.

To print a label, proceed as follows:

1. Create a compilation (see [Creating a new compilation](#)) and select the files to burn (see [Selecting files](#)).
2. Select a LightScribe® recorder from the drop-down menu in the toolbar.
3. If you want to set the print options for LightScribe®:
 1. Click on the **File > Options** menu
→ The **Options** window is opened.
 2. Click on the **LightScribe** tab.
→ The configuration options for LightScribe® are displayed.

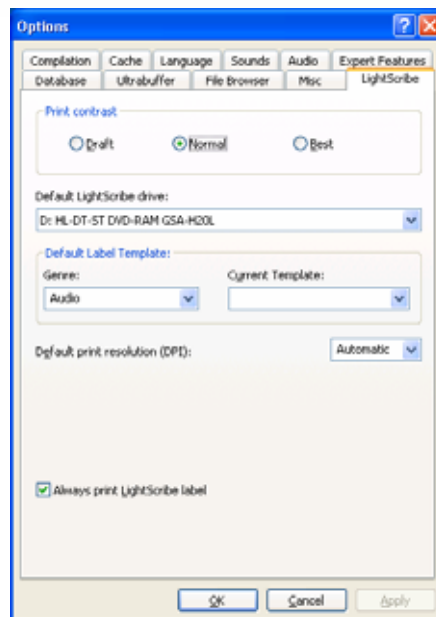



Fig. 15: Options window - LightScribe tab

3. Select the desired print quality from the **Print contrast** area.
The better the quality, the longer the recorder takes to print the label.
4. Set the other options you require.
5. Click on the **OK** button.
→ The changes will be saved and the window closed.
4. Click on the **Burn** button
→ The **Burn Compilation** window is opened.
5. Click on the **Misc** tab.
6. Enable the check box **Print Label** in the **LightScribe** area.
7. If you want to use an existing label:
 1. Select from the entry **Use Nero CoverDesigner files** from the drop-down menu in the **LightScribe** area.
→ The familiar browser window **Open** is opened.
 2. Select a Nero CoverDesigner file and click on the **Open** button.
→ The window is closed and the selected file accepted for this compilation.
8. If you want to create a label for this compilation:
 1. Select the entry **Use label from compilation** from the **LightScribe** area.
→ The **CD Label Editor** window is opened.
 2. Create a label.
 The interface in the **CD Label Editor** window and the procedure for creating labels work on the same principle as Nero CoverDesigner. Please see the separate Nero CoverDesigner User's Guide for full instructions on how to make professional looking covers and labels.
 3. If you want to change the label you have created, click on the **Edit** button.

9. Set the options you require in the tabs.
10. Insert a blank LightScribe® CD with the data side facing down and click on the **Burn** button.
 - ➔ The burn process starts and the compilation is burned. On the screen, a progress bar indicates the progress being made by the burn process. When the burn process is complete the disc is ejected. A dialog box is opened with the message "Please insert a LightScribe disc into the drive with the label side facing down".
11. Insert the blank LightScribe® disc into the recorder with the label side facing down and click on **OK**.
 - ➔ The **LightScribe Print Properties** window is opened and the print process starts. In the **LightScribe Print Properties** window a progress bar indicates the progress being made. When the print process has finished, a dialog window is opened with the message "Burn process completed successfully".
12. Click on the **OK** button.
 - ➔ The disc is ejected.
 - ➔ You have printed a LightScribe® label.

15 LabelFlash™


If you have connected up a LabelFlash™ recorder, you can also use Nero Burning ROM to print a label on the label and/or data side of a LabelFlash™ DVD.

The LabelFlash™ DVD has a special layer in the center of each side; when this is heated by the laser in the recorder it is altered so that images and text are printed on the DVD. LabelFlash™ is a technology that enables both the label and the data side of DVDs in the recorder to be printed. If the data side is printed, this is referred to as the DiscT@2™ procedure.



This function is only available with a LabelFlash™ recorder.

15.1 Burn Label window

In the **Burn Label** window you can create or load a label and print on a LabelFlash™ DVD. The window is opened when you insert a blank LabelFlash™ CD or click on the  icon in the toolbar.



The interface in the **Burn Label** window works on the same principle as Nero CoverDesigner. Basically, it is irrelevant whether you print the label on paper or directly onto an appropriate disc.

Please see the separate Nero CoverDesigner User's Guide for full instructions on how to make professional looking covers and labels.

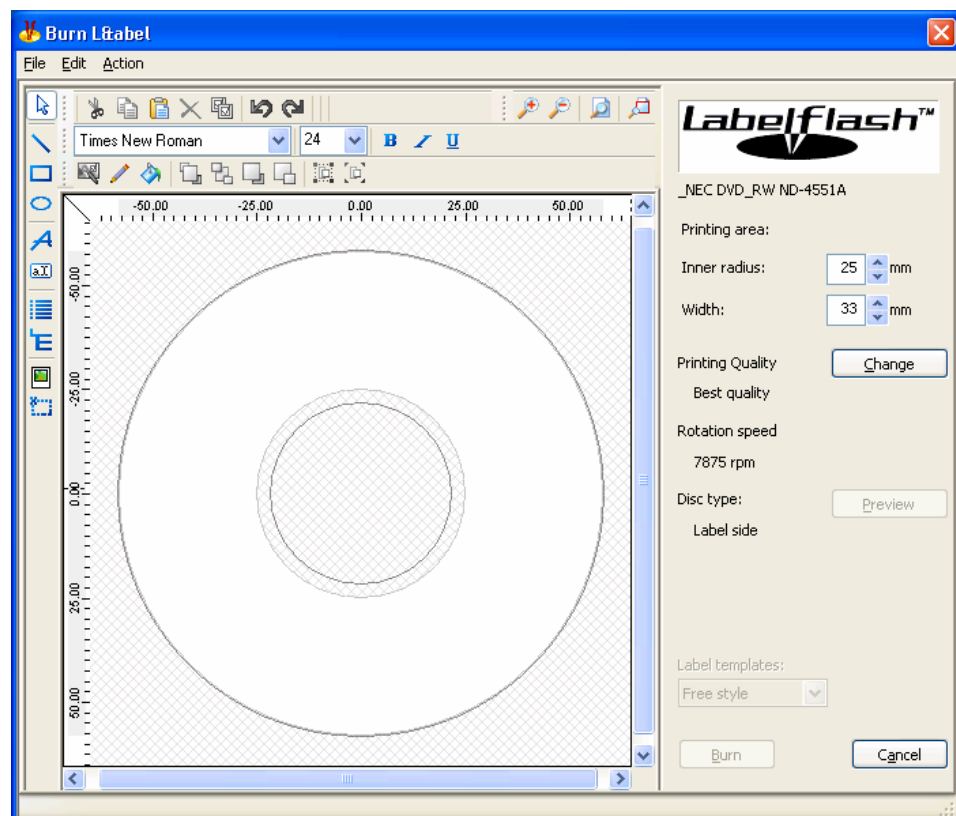


Fig. 16: **Burn Label** window for LabelFlash™/DiscT@2™

Information on the selected printing quality and rotation speed for instance is displayed on the right-hand side of the screen. Under Disc type, you can see whether the blank disc has been inserted with the label or data side. Either the LabelFlash™ or the DiscT@2™ logo is displayed in the **Burn Label** window depending on which side is inserted.

The following configuration options are available:

Inner radius	Defines the distance between the label and the inner edge.
Width	Defines the width of the print area.
Printing quality	Opens the LabelFlash™ – Print Properties window. This is where you can change the printing quality and the contrast level and display the changes made directly in the print preview.
Preview	Opens the Print Preview window that shows how the label should appear on the LabelFlash™ disc.
Label templates	Contains a selection of different templates for designing the label. You can continue to edit and customize a selected template.
Burn	Starts the print process.
Cancel	Cancels the process and closes the window.



If you are creating a DiscT@2, Nero Burning ROM displays only the available print area for creating the label by default, i.e. the area on the data side of your DVD that is not already taken up by data. You cannot increase the radius of the print area.

15.2 Printing LabelFlash™ labels and DiskT@2

Basically, it is irrelevant whether you print on the label or the data side when creating labels. The label is actually printed outside the normal burn process.



You can always print on the label side of the DVD. We recommend that you print on the data side first when you have burned the compilation. It is not possible to burn data on a printed data side. When you insert a DVD on which data has already been burned, Nero Burning ROM automatically identifies the space that is still available on the data side and on which you can print.

To print a LabelFlash™ label on the front or a DiscT@2™ label on the flipside, proceed as follows:

1. If you want to print a LabelFlash™ label on the label side, insert a blank LabelFlash™ disc into the recorder with the label side facing down.
→ The **Burn Label** window is opened with the LabelFlash™ logo.
2. If you want to print a DiskT@2 on the data side, insert a blank LabelFlash™ disc with the data side facing down into the recorder.
→ The **Burn Label** window is opened with the DiskT@2™ logo.
3. Create a label according to your requirements or open a label (**File > Open** menu) that you have already created with Nero CoverDesigner.



The interface in the **Burn Label** window and the process for creating a label work on the same principle as Nero CoverDesigner. Please see the Nero CoverDesigner User's Guide for full instructions on how to make professional looking covers and labels.

4. If you want to change the area in which the label is printed, change the print area accordingly using the text boxes **Inner Radius** and **Width**.
5. If you want to view or change the print properties:
 1. Click on the **Change** button.
 - The **LabelFlash(TM) Print Properties** window is opened.

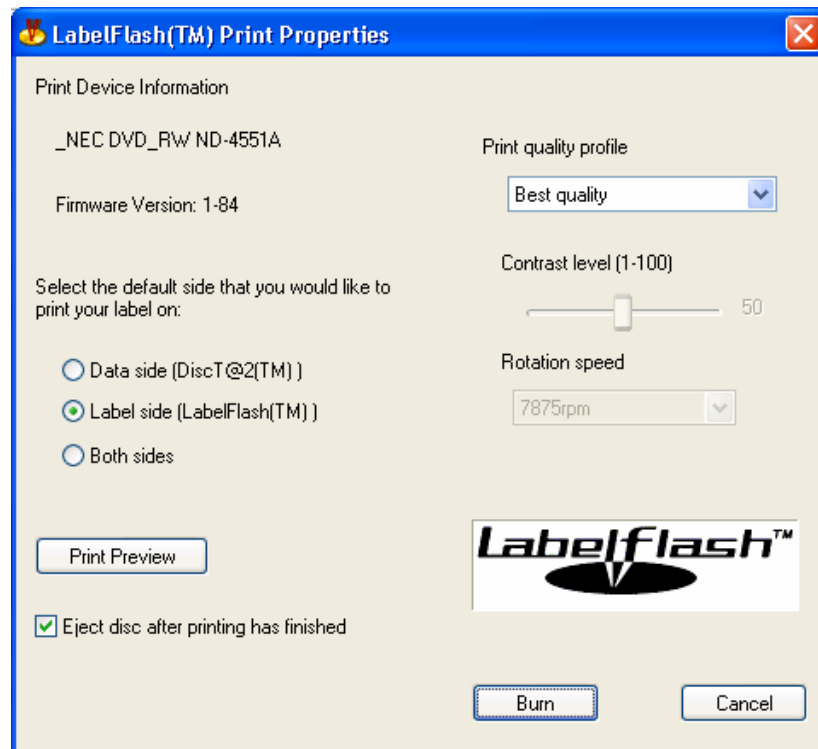


Fig. 17: LabelFlash™-Print Properties window

2. If you want to change the printing quality, select a quality level from the **Print quality profile** drop-down menu.
3. If you select the **User defined** entry from the **Print quality profile** drop-down menu, you can change the contrast level and the rotation speed.
4. Click on the **OK** button.
 - The **LabelFlash(TM) Print Properties** is closed and the changes accepted.
6. Click on the **Burn** button.
 - The labeling procedure starts and the **LabelFlash(TM) - printing** or **DiscT@2(TM) - printing** window is opened. The window shows you the estimated printing time and the print progress. When printing is complete, a dialog window opens informing you about the successful print process.

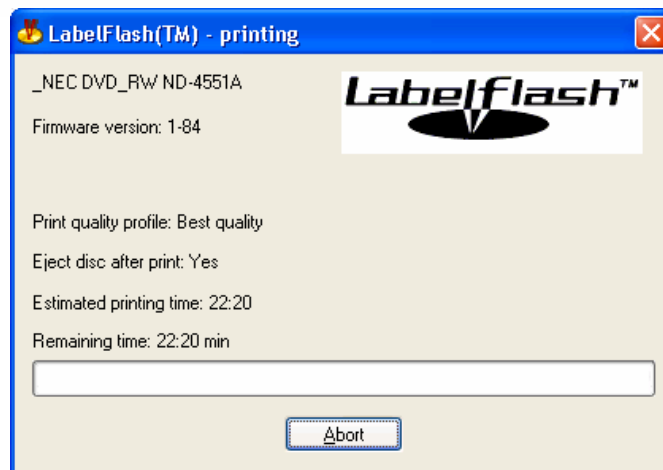


Fig. 18: LabelFlash™- printing window

7. Click on **OK**.
 - ➔ The dialog window is closed and the disc ejected.
 - ➔ You have successfully printed a label.

16 Erasing a rewritable disc

Using Nero Burning ROM you can erase rewritable discs, i.e. discs with the RW specification, as long as your recorder supports this function.

16.1 Erase Rewritable Disc window

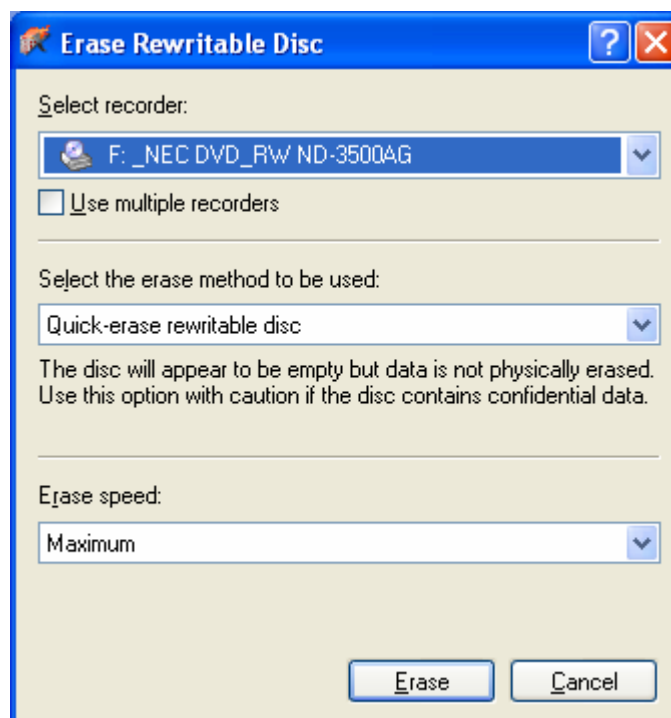


Fig. 19: **Erase Rewritable Disc** window

This window contains the following drop-down menus and configuration options:

Choose recorder	Selects a recorder.
Use multiple recorders	Erases multiple recorders.
Select erase method to be used	<p>Selects an erase method. Two options are available:</p> <p>Quick-erase rewritable disc: does not physically erase the disc fully, but only the references to the existing contents. The disc will appear to be empty even though the data is still physically available. Erasing a disc using this method takes between one and two minutes.</p> <p>Full-erase rewritable disc: physically erases all data from the disc. The contents cannot be restored. Erasing the disc using this method takes longer than the other method depending on the type of disc involved.</p>
Erase speed	Selects the speed at which the disc is erased.
Erase	Starts the erase process.
Cancel	Cancels the action and closes the window.

16.2 Erase Disc

To erase a rewritable disc, proceed as follows:

Requirement: your recorder must support this function.

1. Insert the disc that you want to erase.
2. Select the **Recorder > Erase Rewritable Disc** menu from the main Nero Burning ROM screen.
 - ➔ The **Erase Rewritable Disk** window is opened.
3. If you have installed multiple recorders, select the desired recorder from the **Choose recorder** drop-down menu.
4. If you want to erase data on multiple recorders simultaneously, enable the check box **Use multiple recorders** and select the desired recorder.
5. Select an erase method from the **Select erase method to be used** drop-down list.



If you want to erase confidential data, use the "**full-erase**" method to physically erase all of the data from the disc. Otherwise third parties could restore the contents.

6. If required, select the erase speed from the **Erase speed** drop-down menu.
7. Click on the **Erase** button.
 - ➔ The erase process starts. A progress bar in a window informs you about the progress being made by the erase process. When all data has been fully erased, the window is closed and the disc ejected.
 - ➔ You have successfully erased a rewritable disc and can now write to the disc again.

17 Advanced operations

17.1 Saving data tracks

In addition to the option for saving audio files on an Audio CD, Nero Burning ROM enables you to save data files on a disc. The result is an image file that can be burned to a blank disc later on. Using the **Save Tracks** command in Nero Burning ROM has the following advantages:

- Existing files can also be saved in non-standard formats, e.g. files that are available in the Apple Macintosh HFS format.
- If required a copy of multisession CDs can be created.
Requirement: the table of contents for the sessions does not contain any cross references to previous sessions (see [Multisession tab](#)).



If you use the **Save Tracks** command to select formats other than ISO or HFS, such as native Unix file systems for instance, we recommend that you burn the new image file on a blank disc.

To save files from a data disc, proceed as follows:

1. Insert a data disc into a drive or a recorder.
2. Select **Save Tracks** from the **Extras** menu.
 - ➔ The **Save Tracks** window is opened. Basically, the window is identical to the window used for saving audio files (see [Saving audio files](#)). The **CD player controls** area is grayed out. The track list displays the data files found on the disc.
3. Select the files that you want to save. If you want to save all files, click on the **Select All** button.
4. Set the desired options:
 1. Select the desired output format from the **Output file format** drop-down menu.
 2. If you want to specify a storage location for the image file, click on the **Browse...** button and select a path.
 3. Set other options as required.
5. Click on the **Start** button.
 - ➔ The **Progress** window is opened; a progress bar displays the progress being made by the save process. When the save process is complete, the window closes automatically.
6. Click on **Close**.
 - ➔ The **Save Tracks** window is closed.
 - ➔ You have successfully created an image file starting from a data disc. Now you can burn the image file to a disc (see [Burning an image file](#)).

17.2 Updating the virus scanner

A virus scanner that checks the data to be burned is integrated in Nero Burning ROM. This ensures that infected data will not be burned. We recommend that you update the virus scanner database regularly. The database is updated via an Internet connection.

To update the virus scanner, proceed as follows:

Requirement: you must have an active Internet connection.

1. Click on the menu **Help > Update Antivirus Scanner**.
 - ➔ A dialog window is opened which reminds you to connect to the Internet.
2. Click on **OK**.
 - ➔ Nero Burning ROM is connected to the FTP server av.nero.com and the antivirus files are downloaded. The **Downloading File** window is opened; a progress bar indicates the progress being made by the update process. When the database has been updated, a dialog window is opened with a message indicating that the database is now updated.
3. Click on **OK**.
 - ➔ The dialog window is closed.
 - ➔ You have successfully updated the virus scanner database.

18 Configuration

18.1 Configuration options

You can define options for working with Nero Burning ROM in the **Options** window. Open the window by click on the **Options** entry in the **File** menu.

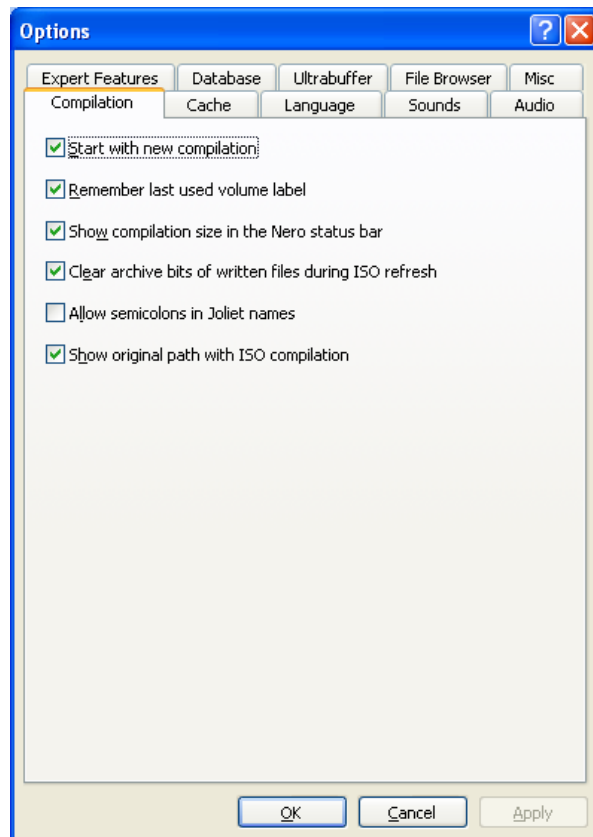


Fig. 20: **Options** window

The **Options** window contains the following tabs:


Tab	Description
Compilation	Contains options for compilation and the selection screen.
Cache	Contains options for the cache.
Language	Contains selection options for language and font.
Sounds	Contains selection options for sounds in connection with burn tasks.
Audio	Displays the directory for the audio plug-ins.
Expert Features	Contains options for configuring overburning and burning (see Expert Features). We recommend that you retain the default settings.
Database	Shows the path to the local Audio CD database and offers the option to use the Internet database.

Ultrabuffer	Defines the size of the RAM buffer.
File Browser	Contains options for configuring the file browser.
Misc	Contains options for configuring compilations, burning, the database, the user interface as well as advanced settings for Nero Burning ROM.
LightScribe	Contains options for configuring LightScribe® recorders such as the print contrast (quality), default drive and default template for instance. The tab is only available if a LightScribe® recorder has been installed.

18.2 Expert Features

The **Expert Features** tab in the **Options** window provides you with further configuration options for burning and overburning for instance. You can restore the default feature at any time by simply clicking on the **Restore** button.



Using Nero Burning ROM you can overburn a disc beyond the specified capacity. You can display the capacity of a disc using the  button. Tolerances in the manufacturing process often cause the actual rewritable area on the disc to exceed the maximum specified capacity. This additional area is often 2-3 minutes long, but may also be shorter or longer. It is not technically possible to establish the precise extent of the excess capacity prior to burning.



During the overburn process, the following difficulties may arise:

Read errors, sound errors, incorrectly written data and error messages during the burn process.

Theoretically the recorder could be damaged.

The following configuration options are available:

Enable Disc-at-once CD overburning	Enables overburning for CDs in disc-at-once mode.
Relative maximum overburning size:	Defines the relative maximum overburning size. The position of the yellow mark on the capacity indicator also changes. Caution: this is only a visual signal and does not create any extra space on the disc.
Absolute maximum overburning size:	Defines the absolute maximum overburning size. The position of the red mark on the capacity indicator also changes. Caution: this is only a visual signal and does not create any additional space on the disc.
Enable DVD overburning	Enables overburning for DVDs. If the check box is enabled, you can specify the maximum DVD size in the text box.
Enable generation of short lead-out	Writes a short lead-out for CDs that are being burned in disc-at-once mode. This creates additional capacity of about 12 MB.
Do not eject disc after the burn is complete	Does not eject the disc after the burn process is complete.

Allow to disable finalizing for burning a disc image	Disables finalizing when an image file is saved.
Enable all supported recorder formats for image recorder	Enables all supported recorder formats for Nero Image Recorder. It is now possible to create compilations that the installed recorder cannot burn. You can therefore create a DVD compilation without a DVD recorder for instance and create an image file using Nero Image Recorder. The same applies for HD DVD and Blu-ray discs.



The **Restore** button resets all options in the **Options** window to the default setting.

18.3 Customize window

In the **Customize** window you can adjust the work environment in Nero Burning ROM to suit your own individual requirements. You can open the window via the **View > Customize** menu.

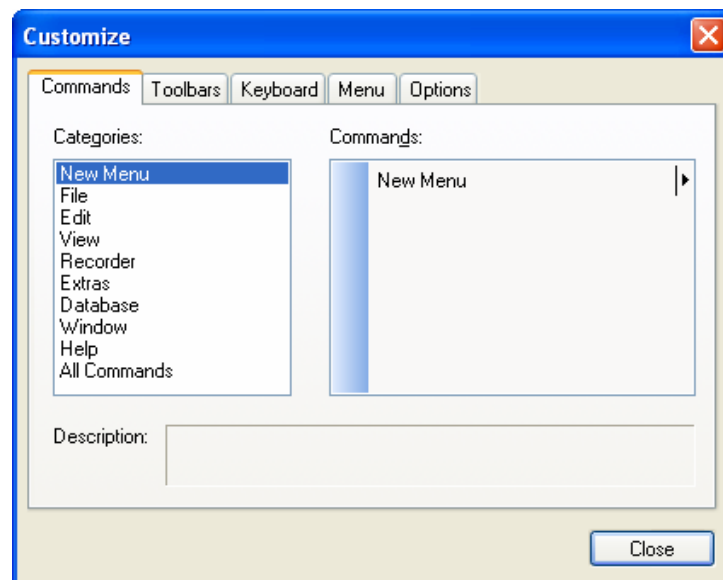


Fig. 21: **Customize** window

The window contains the following tabs:

Tab	Description
Commands	Contains the option for adding commands to a toolbar.
Toolbars	Contains the option for creating, renaming, removing toolbars or for canceling changes. You cannot rename or remove the default Menu Bar and Standard toolbars.
Keyboard	Contains the option for defining keyboard shortcuts for commands.
Menu	Contains the option for animating the menus in the menu bar and for selecting shading.
Options	Contains the options Show ScreenTips on toolbars , Show shortcut keys in ScreenTips and Large icons

18.3.1 Customizing the work environment

In Nero Burning ROM you can customize your work environment to suit your individual requirements. To do this, proceed as follows:

1. Click on the **View > Customize** menu.
 - ➔ The **Customize** window is opened.
2. If you want to create a new toolbar:
 1. Click on **Toolbars** tab.
 2. Click on the **New** button.
 - ➔ The **Toolbar Name** window is opened.
 3. Enter a name in the **Toolbar Name** text box and click on the **OK** button.
 - ➔ The **Toolbar Name** window is closed and the new toolbar, which is still empty, is created. This is now in the **Toolbars** selection list.
3. If you want to add commands to a toolbar:
 1. Click on the **Commands** tab.
 2. Select a category from the **Category** selection list and then a command from the **Commands** selection list.
 3. Drag the command to the desired toolbar.
 - ➔ The command is inserted.
 4. If you want to change the display for the picture and/or text, show the context menu and select the desired display type.
 5. If you want to remove a command from the toolbar, drag the relevant icon out of the toolbar.
4. If you want to define keyboard shortcuts for commands:
 1. Click on the **Keyboard** tab.
 2. Select a category from the **Category** selection list and then a command from the **Commands** selection list.
 - ➔ In the **Current Keys** area the current key combination is displayed for this command, if it is available.
 3. Enter the new key combination in the **Press New Shortcut Key** text box.
 4. Click on **Assign**.
 - ➔ The new key combination is assigned to the command. You can now use it in Nero Burning ROM.
5. Define the other settings.
6. Click on **Close**.
 - ➔ The changes are accepted and the window closed.
 - ➔ You have successfully customized your work environment.

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20 Glossary

Blue Book

Standard for CDs created in the formats CD Extra and Enhanced CD.

Blu-ray Disc

Abbreviated to BD. The Blu-ray disc or Blu-ray is a possible successor to the DVD. The BD was developed by the BDA (Blu-ray-Disc Association) in response to high-definition video requirements. Their storage capacity is practically five times that of DVDs. Single-layer discs can store data volumes of up to 20 GB and dual-layer discs up to 50 GB. In BD recorders a blue-violet laser is used, which can write the data "more tightly" on the disc. The protective layer is also thinner.

Book Type

The Book Type defines the specification (e.g. DVD-, DVD+, DVD-ROM) of a DVD and is stored in the lead-in. Even burned DVDs are sometimes not read by DVD players. This may be due to the fact that the players either cannot read or have difficulty in reading DVD-, DVD+ or DVD-RW. Using Nero Burning ROM you can set the book Type of the self-burned DVD on DVD-ROM to guarantee playback.

Bootable CD

Boot refers to the loading of the operating system on the computer when it starts up. This is normally done from the hard drive. If you do not want to or cannot boot from your hard drive, you can use a bootable CD to boot from the disc drive.

Cache

Fast temporary storage (buffer), which is used in different areas in a computer.

CD

Compact Disc. Widely used disc type. The following types of CD are available:

CD-ROM	Compact Disc-Read Only Memory. Various computer readable forms of data such as programs, picture or audio data, for instance, can be stored in this format.
CD-R	Compact Disc - Recordable. Write-once disc.
CD-RW	Compact Disc - ReWritable. A disc that can be written to more than once.

CD-DA

Compact Disc - Digital Audio. The first standard for Audio CDs. An Audio CD consists of multiple audio files whereby one file generally corresponds to one title/song; in addition, each file is subdivided into sectors.

CD-i

Compact Disc-Interactive. Format for multimedia CDs that combine video, audio, and data and can only be played using a CD-i player or CD-ROM drive that supports CD-i technology.

CD Text

Additional information on the CD that can store the title and artists of the individual pieces for instance. CD Text is stored in the so-called lead-in area of the CD before the audio data starts.

Not all CD players support CD Text. Despite this a CD with CD Text can still be played in the player.

You must have a CD recorder which supports CD Text to enable the CD Text to be written to a CD. In particular, CD Text can only be written in disc-at-once mode. Please refer to the recorder selection dialog in Nero Burning ROM to find out whether your recorder supports CD Text.

Decoding

Decoding refers to the conversion of computer readable audio files (e.g. mp3) into Audio CD format. Decoding takes place at the same time as the burn process.

Digitalization

Conversion of analog signals to digital signals.

Disc

Disc is a data medium to which the data is saved. CD-R, DVD-R, and DVD+R are examples of write-once discs that are written to by a recorder and read by a player. Discs of the same type with different storage capacities are available, e.g. for DVD-R with 4.38 GB or as DVD-R DL (Dual Layer, with two data layers) with 7.95 GB.

Disc-At-Once (DAO)

An entire CD/DVD is recorded without ever stopping the laser. This format is best for Audio CDs that will be played in home and car stereo equipment.

DVD

Digital **V**ersatile **D**isc or **D**igital **V**ideo **D**isc. DVD was originally designed for the movie and games market. In the meantime it has become possible to burn data and certain video films to a DVD-Video disc and play them on all DVD-ROM drives. The following types are available:

DVD-R	The DVD-R is a non-rewritable format that is compatible with most DVD-ROM drives and DVD players.
DVD-RAM	Format of rewritable media that is compatible with most DVD-ROM drives and DVD players. Files cannot be copied and deleted.
DVD-RW	DVD Re Writeable. The DVD-RW is a rewritable disc that fulfills the same functions as a DVD-R, but is compatible with fewer DVD-ROM drives and DVD players.
DVD+R/RW	Format developed in cooperation with Hewlett-Packard, Mitsubishi Chemical, Philips, Ricoh, Sony, and Yamaha. DVD+RW is a rewritable format that is fully and immediately compatible with DVD players and DVD-ROM drives.

EDC/ ECC

Error **D**etection **C**ode/**E**rror **C**orrection **C**ode. Used to identify and correct scan errors which may be caused by scratches or dirt on the surface of a CD.

Emulation

Simulation of the structure and function of a system, e.g. a bootable disc can "emulate" a floppy drive.

Encode

Encoding is the conversion of audio files that are located on an Audio CD into an audio format that the computer can read (e.g. mp3).

Finalizing

Definitive conclusion of the process of writing to a CD/DVD. After this it is not possible to write to the CD/DVD anymore. However, a finalized rewritable disc can still be deleted. A disc is automatically finalized if it is burned using the disc-at-once method.

Firmware

The firmware in recorders functions as the operating system of the drive and contains instructions which determine how the drive reacts to commands from the PC. Generally the firmware in modern recorders can be updated, improving the support for discs from other manufacturers for instance.

HD DVD

High Definition DVD. A possible successor to the DVD with greater storage capacity. The format is recognized by the DVD Forum. The HD DVD was developed in response to high-definition video requirements. Single-layer discs can store data volumes of up to 15 GB. In HD DVD recorders blue-violet laser is used, which can write the data "more tightly" on the disc. This makes it possible to store large quantities of data.

HFS CD

File system used by Apple© Macintosh systems. This format is only suitable for Macintosh discs.

Image File

An individual file on the hard drive that contains an image of a complete disc. An image can be used if problems occur during the burn process or if there is no recorder connected to the PC. You will need free space on your hard drive to create an image.

Index Position

You can set index positions within an audio track. You can "jump" to these using a suitable CD player. Currently, only very few CD players can handle index positions.

Table of Contents (T.O.C.)

Indicates the content of each session. The table of contents is stored in the lead-in.

Jitter Control

Many CD-ROM drives cannot read an individual sector on an Audio CD, which means that small gaps may occur in the data stream. Audio correction synchronizes the data stream by overlapping the sectors and so gaps do not occur.

Crossfade

A crossfade is a merging between two audio tracks. The start of the new track begins softly, while the current track is still playing. The two tracks merge without a pause.

Label

Most CDs have an imprint or label. You can use different methods, such as screen printing for example, to apply a label to the CD.

Lead-in

The initial area of every session is known as the lead-in. This is where the “table of contents” for your disc and additional information concerning the CD is stored.

Lead-out

The final area in a session. This area is located at the end of the disc. If the disc has not yet been finalized, the reference to the next session is stored here.

M3U Playlists

An M3U playlist is a file that contains a list of paths to MP3 files. Nero Burning ROM can process M3U playlists, i.e. when creating an Audio CD, all you need to do is drag an M3U playlist into the Compilation Area. You can also save information on the artist and the title of an audio file to the M3U playlist.

MP3

MPEG-1 Audio Layer 3. Audio format often used to compress audio files to a fraction of their original size (ratio 1:10) without any loss of quality.

MPEG

Motion **P**icture **E**xperts **G**roup. Standard that was developed for videos compressed at a higher ratio (e.g. SVCD and VCD).

MPEG-1	This format which is a part of the MPEG compression family has the highest compression rate.
MPEG-2	There are only minor differences between MPEG-1 and MPEG-2. MPEG-2 works better with TV sets with interlacing and is a broadcasting standard.
MPEG-3	Standard for defining High Definition TV.
MPEG-4	This standard is the next generation of MPEG-2.

NTSC

Standard for video and television in the United States and Japan. NTSC has more frames per second than PAL, but has fewer horizontal lines.

PAL

Video and TV standard in Europe. PAL has more horizontal lines than NTSC, but has fewer frames per second.

Photo-CD

CD which is used for storing images, photos, slides, and other visual data. A photo CD generally consists of multisessions. The standard originates from Kodak and Philips.

Plug-in

Software used to add other features to a program (software) or to support troubleshooting.

Buffer Underrun

Buffer underruns are caused when there is an interruption to the flow of data to the internal buffer of the recorder. This can be the fault of the software or the hardware itself. When recording, data is fed continuously to the recorder's buffer in order to keep a steady flow of data which is required when recording. When something interrupts that steady flow, it can cause a buffer underrun and your disc is no longer useable.

Most modern recorders have a protective mechanism against buffer underruns.

Red Book

This standard describes the CD-DA.

Recorder

A recorder writes to discs. A recorder is commonly referred to as a "burner".

SCSI

Small **C**omputer **S**ystem **I**nterface. Bus system to which different terminal devices such as a SCSI hard drive, streamers or a CD recorder may be connected. At this time, SCSI is the only possibility of operating a CD recorder on a typically used computer system.

Sector

Smallest addressable information unit on a CD. A sector is composed of 2,352 bytes of which - depending on the type of CD used - differing amounts are available as user data. A sector generally consists of a header, synchronization bits and user data. It may also have error recognition and correction data. A drive with a simple read speed of 1/75 seconds is required to read a sector.

Session

Discs such as CDs and DVDs are divided into tracks and sessions. A session is a self-contained data area that is burned using a single process, and consists of a lead-in, one or more tracks, and a lead-out. In principle, a session is comparable to the partition on a hard drive. A multisession disc can contain multiple sessions.

Simulation

Performs all steps in a burn process without using the laser beam. We recommend running a simulation if you are decompressing data before burning, e.g. when burning an Audio CD from MP3 files. You can assume that if simulation is successful, the burn process will also be successful.

SVCD

Super **V**ideo **C**D

Track

Data unit that joins successive sectors on a disc. On an Audio CD a track corresponds to a piece of music. Several tracks together with the lead-in and lead-out build a session.

Track-At-Once (TAO)

Writing method in which each track is written individually to the CD. The writing process is interrupted briefly after each track, i.e. the laser switches off. With this writing method, it is only possible to continue writing to a CD sometimes and at a later stage.

Transcoding

Transcoding is the conversion from one audio format to another, e.g. WAV files to MP3 files.

VCD

Video **C**ompact **D**isc, Video-CD. Movies, audio, and video data is stored using the MPEG compression standard. VCDs can be played by the majority of CD-ROMs, DVD players, and DVD-ROM drives with the appropriate software for processing this video format.

Volume Descriptor

Area at the beginning of a CD containing the structure of the file system. It may also contain additional and optional information about the CD (e.g. the name of the CD, the publisher, the copyright notice).

Yellow Book

The Yellow Book is the standard for the format of CDs used for data storage.

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22 Tab Matrix

This matrix shows which tabs are available for which disc format in the **Compilation** window. The tabs are listed in the top row; the disc formats in the left-hand column.

An "x" entered in a cell within the table indicates that the tab is available for this disc format. A "-" in a cell indicates that the relevant tab is not available for this disc format. The "Extra" column lists specific additional tabs that apply to the respective disc format.

	Info	Multisession	ISO	UDF	Title	Date	Misc	Audio CD	CDA Options	Burn	Extra
CD/DVD-ROM (ISO)	x	x	x	-	x	x	x	-	-	x	-
Audio CD	x	-	-	-	-	-	-	x	x	x	-
Mixed Mode CD	x	-	x	-	x	x	x	x	x	x	-
CD EXTRA	-	-	x	-	x	x	x	x	x	x	-
Video/Super Video CD	-	-	x	-	x	x	x	-	-	x	Video CD Menu
miniDVD	x	-	x	-	x	x	x	-	-	x	-
CD/DVD-ROM (Boot)	x	-	x	-	x	x	x	-	-	x	Boot
CD/DVD/HD DVD-ROM/ Blu-ray Disc (UDF)	x	x	-	x	x	x	x	-	-	x	-
CD/DVD-ROM (UDF/ISO)	x	x	x	x	x	x	x	-	-	x	-
Audiobook CD	-	-	-	-	-	-	-	-	-	x	Audiobook CD
DVD-Video	x	-	x	-	x	x	x	-	-	x	-

23 Contact

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